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The care of the human mind is the most noble branch of medicine.—GROTIUS.

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No. 1.

ESSAYS, CASES, AND SELECTIONS.

PATHOLOGICAL NOTES. BY J. WORKMAN, M. D.

Read before the Association of Medical Superintendents of American Institutions for the Insane.

I. GENERAL PARALYSIS.

THE pathological state of the brain in cases of insanity accompanied by that defect in the muscular powers which has been termed "*General Paralysis*," is a subject of much interest, not only to the members of our specialty, but to the profession at large. It is now well known that the diseased conditions of the brain, or of different portions of it, which accompany general paralysis, and the morbid structural lesions which are found to have resulted, are much more diversified than was formerly supposed. Post-mortem examinations have shewn that paralysis of the insane may arise from almost any important transformation of structure, or from any form of diseased action in the brain or its investing membranes, which terminates in the deposition of extravasated fluids within the cranium. Softening, whether local and restricted to a portion of the medullary substance, or general and involving both the white and grey matter, as in *œdema cerebri*; hardening of the general mass of the brain, or of par-

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ticular portions; unequivocal inflammatory deposits, still associated with vascular turgescence, and capillary discoloration; simple serous exudation on the surface, or within the ventricles, with scarcely a trace of recent inflammatory action; these, and many other different, if not almost antithetic results, are found to have arisen, in the course, or at the close, of a malady, the external manifestations of which during life, have appeared to be characterized by an almost stereotyped uniformity.

After much reflection on the phenomena of insanity accompanied by paralysis, I am almost tempted to the belief, that it should be excluded from the general subject of mental alienation, and ranked in our nosology as a distinct and essential disease of the brain. Its claims to this independent status, are surely not less clear and legitimate, than are those of phrenitis, hydrocephalus, delirium tremens, or apoplexy.

Is not the delirium of general paralysis very different from the delusions, and mental and moral perversions, of common insanity? Do not the corporeal phenomena differ still more widely? and is not the prognosis infinitely more unfavorable? General paralysis may, without exaggeration, be designated the *opprobrium* of our specialty. Its victims, especially in Europe, constitute no inconsiderable portion of asylum incurables; and I think if we could, consistently with scientific exactitude, remove it into another province, we should, in so doing, neither injure humanity nor our own reputation.

I beg to submit the following six cases to the notice of the Association, trusting that imperfect and superficial as the details certainly are, they may not be altogether uninteresting:—

P. M. 70.—Frederick S., a German, by occupation a schoolmaster; was admitted into the Asylum at the age of 50, in the year 1849, and was discharged “recovered” after three months’ residence.

He was re-admitted on 14th July, 1852, at which time his attack was stated to be of four weeks’ duration; but it would appear that his previous attacks had been numerous. It is my conviction that at no period from his first admission had complete recovery taken place. He came under my charge 1st July, 1853, on my assumption of of-

fice. In consequence of frequent apoplectic seizures, and his inability to balance the body when attempting to rise or walk, my predecessor had placed him on a bed laid on the floor in a warm room. His head presented the largest frontal and inter-parietal development I have ever observed in an adult, but was very defective in the occipital region. From time to time he had recurrences of his apoplectic seizures, which were generally heralded by paroxysmal excitement, and accompanied by a constipated state of the bowels. He died in one of these fits, on the 5th of October, 1855.

The *post-mortem* was made twelve hours after death. The cranium and its integuments were both remarkably thin. The dura mater was firmly attached to the cranium at numerous points, by means of prominent enlarged glandulæ paccioni, which in some places had provoked absorptive action, and eaten through the inner table to the diplœ. The membranes were thick and opaque, and a large quantity of serum was found within the arachnoid, and in the ventricles. The grey matter was very thin,—and the whole brain was unusually soft. The cerebellum was not one-half the normal size. It appeared to have been atrophied. The muscles, and all the tissues of the body, were pale and flabby. The right thorax was full of serum; but both lungs were sound. The heart was large and flabby. The abdominal viscera were healthy.

P. M. 94.—John K., aged 57, a native of France, many years resident in Western Canada, in stature about six feet, and before his insanity a man of noble bearing, and engaging manners. He was involved in the rebellion of 1837, and was imprisoned for several months in Toronto, on charge, or suspicion, of treason. He was extensively engaged in milling and mercantile operations, in which he ultimately failed, and his business troubles appeared to have upset his intellect.

He was admitted into the Asylum on 29th September, 1856. I never felt a greater shock than on now regarding this man, and recalling his former splendid appearance. His malady had existed for three and a half years, and had brought him down to the most abject state of physical helplessness, and mental dethronement. He had once spoken French, German, and English, fluently. He now

seemed to be oblivious of all but the French tongue; and yet the little he spoke exhibited the vestiges of superior mind.

He was far advanced in that hopeless disease, general paralysis of the insane. The period of active delirium was past; and that of animal degradation was fast running to its close. When he attempted to walk, his body was bent into an oblique lateral curve, as if he was stooping to examine closely something on the floor a little to the left and in front of him. He moved with a gyratory tendency—the muscles of the right side out-doing those of the left; and both the upper and lower extremities were involved in this disparity of muscular action and power. He lost control of the sphincters, and in seven weeks after admission he died, but without any marked comatose symptoms.

The *post-mortem* was made twenty hours after death. Upon laying open the dura mater about four ounces of serum, slightly tinged with blood, flowed out. The dura mater adhered to the cranium on three-fourths of its superior surface. The meninges were not thickened. The surface of the cerebrum was free from disease, excepting in a narrow portion on each side of the falx major, where a number of white granular spots were seen. On opening the ventricles, not more than one ounce of fluid was found on the right side, and half an ounce on the left. The corpora striata were both softened to an extreme degree, so that their substance would not bear the most gentle manipulation. A small dark clot, not probably of recent deposit, was found within the circle of Willis. The cerebellum was softened equally with the corpora striata. The whole surface of the cerebrum was of normal firmness. The thoracic and abdominal viscera were in a healthy state, with the exception of a slight inflammatory deposit, apparently recent, on the exterior of the heart.

P. M. 99.—George D. R., aged 40 years; admitted 29th April, 1856. This person was an Englishman, of low stature and rotund form. He had once been employed in commercial business, but evinced very inferior capacity. Being respectably connected he was provided for by a public office in a remote part of Canada, where he managed to get through the duties required of him after the usual

manner of such functionaries. In November, 1855, he had an attack of cerebral disease, which was regarded and treated as phrenitis. On passing through this illness he was found to be insane, and on being presented at the Asylum, the first word he uttered very unequivocally showed the case to be one of incipient paralysis of the insane. His tongue moved draggingly, his articulation had the characteristic drunken thickening, and his gait showed the wonted halt of this stage of the disease. He was cheerful, good-natured, and apparently well pleased with himself and all the world. He believed himself very affluent, expressed great fondness for his wife and children, and contemplated making each of them very munificent appropriations. His appetite was voracious, and he became fat, and looked very well. His nights were frequently sleepless, and when so, he made much noise, muttering some sort of liturgical composition, with the accent of some of our modern clergy. He had, during the period of his residence, which was nearly ten months, several apoplectic attacks, two of which were formidable, and the second proved fatal, on the 18th February, 1857.

The autopsy was held twenty-nine hours after death. Between the dura mater and arachnoid there were about four ounces of serum, and in the ventricles two ounces. The whole of the superior surface of the cerebrum showed inflammatory deposits, and beneath were found several small clots, or rather vestiges of clots. The medullary matter at the great commissure was perhaps softer than normal. No other part of the brain showed softening. The corpora striata and the thalami were in a healthy state, yet the patient was for some time hemiplegic, and for several days before death powerless on both sides.

P. M. 100.—Richard H., a native of New York, aged 40 years, formerly a tall, robust, active and intelligent man, was admitted the 2nd November, 1855, and had then been eighteen months insane. The malady was hereditary, and in his case was ushered in by a fit of apoplexy. The usual phenomena of ambitious monomania were exhibited in their highest form in his delirium. Before being brought to the Asylum he had ruined himself by land

speculations; but he did not regard his losses, for his ideal wealth was boundless. He possessed millions of acres of first-rate land, and mill sites without number. The defect of muscular power on one side was very striking when he walked. His tongue evinced the usual characteristics of the disease. He was resident for sixteen months, and his history during that period was but the stereotyped narrative of all similar cases. The autopsy was held twenty-seven hours after death. The dura mater was adherent to the skull in almost every inch of its extent, and when cut into, six ounces of serum escaped; on the postero-superior surface of the cerebrum was observed the debris of an old blood clot, and the pia-mater was wanting at that place. Several similar marks of sanguineous deposit, of remote date, were observed in the sulci. The ventricles contained three ounces of fluid. The entire substance of both the cerebrum and cerebellum was much indurated, being as firm as if immersed for several days in alcohol.

The two preceding cases (99, 100) were referred to in a paper which I had the honor of reading before this Association, in May, 1856, at Cincinnati, and which was published in the *JOURNAL OF INSANITY* for July of that year.

I then stated that both the patients showed "the clearest indications of cerebral disorganization," which I predicted would "eventuate in general paralysis." Both were then "great eaters, and had become very corpulent." I anticipated "in each an apoplectic breaking down." This prediction was but too fully verified. The following points of concurrence and of difference may be noted in these two cases.

In each the mental phenomena were similar in the delusion as to the possession of great wealth, but dissimilar as to the application of it. No. 99 was an Englishman, and talked much about buying dress and cakes for his wife and children. He was a very zealous churchman, and a great loyalist. He was one of the boat's crew which, in the rebellion of 1837, cut the steamer *Caroline* from her moorings, and sent her over the Falls of Niagara. No. 100 was an American, and his "peculiar vanity" was specu-

lation in town lots, mill sites, and wild lands. Religion did not trouble him much, though he was a very good and amiable man. He showed his loyalty before his illness by a peaceable, active, and useful life, and in his delirium he was as inoffensive and conciliating as he had ever been in his days of sanity.

The pathological state of the brain in each agreed in the important lesions of considerable serous effusion outside and within, and in the presence of blood-clot vestiges on the cerebral surfaces, but differed as to inflammatory lymph deposits—number 99 showing them largely, and number 100 showing none.

Number 99 commenced with an attack of acute inflammation. Number 100 had been exempt from any such attack. The former had no adherence of the dura mater to the cranium; the latter had the dura mater adherent "in almost every inch of its extent." The entire brain was in a state of induration in the former, but of normal consistence in the latter, excepting a slight apparent softening of the medullary matter.

P. M. 102.—George W., aged 40, an Englishman, recently arrived in this country, was admitted 15th December, 1856, died 14th March, 1857. No history of this patient's case was furnished. I learned from himself that his father had died paralytic. His articulation indicated the formative stage of general paralysis, and I was on the lookout for apoplectic seizure. His ideas were of the exalted order. He wished to undertake large contracts, and he considered himself a very eloquent preacher. His discourses did not seem to command the admiration, nor to improve the piety of his audience. He was very destructive of clothing, and extremely restless. His progression was ill-directed, for he was constantly injuring himself by knocks against door-posts, tables, &c., as if his eyesight was defective, which, however, was not the case. His appetite continued good, and his appearance did not deteriorate.

The expected attack of apoplexy took place on the 13th March, and proved more formidable than was apprehended. Paralysis of both sides of the body was manifest; the pulse was feeble and not

full, the aspect pallid, the pupils were dilated; coma supervened, and death took place in fifteen hours from the seizure.

The *post-mortem* was held thirty-four hours after death. Little besides encephalic congestion was discovered. A few vestiges of old clots were noticed on the surface of the cerebrum. The substance of the brain throughout was normal, and no serous or sanguineous effusion was found. The pericardium contained a small quantity of serum. The heart and lungs were sound. The abdominal viscera were all healthy.

P. M. 108.—James H., an Englishman, aged 37; of middle stature, and very good appearance; was admitted 20th August, 1857, and was reported to have been insane only two months. His case was instantly perceived to be one of general paralysis, in an advanced stage. He was very mild, and easily managed. He was free from exalted delusions; his mind seemed to be in a state of bewilderment. He answered questions pertinently, but evinced great obliviousness. His appetite was good, and all the functions of alimentation and excretion were well performed, yet his paralytic condition rapidly became worse. He lost control of the sphincters, and soon after seemed to be devoid of all muscular power. He became semi-comatose, but could be roused to attention, when he would mutter, as if waking from sleep, "How is this?" or "What can this be?" and presently fall back into the same torpid state as before. He continued thus for several days, and died on the twenty-first day from his admission.

The *post-mortem* was held fourteen hours after death. The head only was examined, as it was believed that all the symptoms pointed exclusively to this part. The dura mater was found adherent to the posterior portion of the cranium for some extent. About two ounces of serum were diffused between the pia mater and arachnoid, and the ventricles contained about two ounces more. Upon elevating the trunk about an ounce of serum flowed from the theca vertebralis. The brain was, in every other respect, perfectly healthy.

In the six preceding cases, five had serous effusion, both on the surface of the brain and in the ventricles; four had adhesion of the dura mater to the cranium; three had vestiges of apoplectic clots;

one had lymph deposits on the surface of the cerebrum, and this case is the only one which, so far as I am aware, had acute inflammation of the brain at the outset. Two had limited softening, one had general softening, and one had general hardening of the brain-substance. The two most recent cases, which terminated within a few months from the manifestation of paralytic symptoms and mental disorder, showed but trivial marks of diseased brain. Indeed, number 102 showed nothing beyond the traces of previous apoplectic attacks, and recent apoplectic engorgement.

P. M. 107.—Sarah W., a girl of 18 years, tall, emaciated, and feeble; was admitted 25th March, 1857. Had been insane for seven months previously; and her malady was ascribed, as is too often the conclusion of both the faculty, and their female adherents, to suppressed menstruation: consequently she had run the gauntlet of einmenagogue conflict, with the usual result in such cases. Her step seemed to be uncertain,—occasionally tottering. Her articulation was rather deliberate, but free from that drunken thickening and dragging so palpable in cases of paralysis of the insane in men. She was fond of reading, and evinced pious tendencies. She was gentle and amiable, and had conciliated the kind feelings of all her associates. From her general aspect, the external conformation of the chest, and auscultation of the thorax, tubercular pulmonary disease was diagnosed. She continued in her wonted condition until 2nd of August, when as she was passing from her chamber door across the corridor, she uttered a scream, started as if in terror, and fell. She was carried to her bed, and I saw her immediately. I found the left side of the body totally paralyzed, but the right retained muscular power. She rapidly passed into a comatose state, and died on the day after the seizure.

The *post-mortem* showed the skull to be unusually thin. The glandulæ pæchioni were rather prominent. The membranes appeared healthy. On the inferior surface of the cerebellum a vesicle about twice the size of a Windsor bean was found, filled with clear fluid. The right cerebral ventricle was distended with yellowish serum, in quantity exceeding two ounces. The left ventricle had no

serum. No topical softening or induration was found in the brain; the substance of which was uniformly soft, but not more so than is usually met with in subjects with general laxity of tissue. The thorax contained a few ounces of water on each side. In the upper portion of the left lung were found several indurated deposits, each as large as a pigeon's egg, and of a deep black color. On cutting into these their centres were found to be in the process of softening. A few small tubercles, of light color, were found scattered through other portions of the lungs.

I have appended this case to the preceding six, not as one properly coming within the section of general paralysis, under our present system of classification, which necessarily requires deprivation of muscular power, and that to some extent and of some duration, as a characteristic of the disease; but because its pathological details have appeared to me to establish an affinity with the others, which entitles it to a contiguous position.

In five years I have not, in the Toronto Asylum, met with a single case of general paralysis in a female; and I have had only two cases, including this fatal one, in which paralysis in any form appeared. The second patient has been hemiplegic for nearly five years. The mental and bodily symptoms, in her case, have never borne any striking likeness to those observed in the male cases of general paralysis. Her paralysis came on suddenly, after an apoplectic fit. She has had no recurrence of the apoplexy; her insanity does not approximate to the ambitious monomania of general paralysis, and no change has taken place in her speech. My present impression is that her brain is free from progressive disease, and that the only lesion within it is a residual sanguineous clot.

Why is it that in America general paralysis of the insane is almost, if not altogether, confined to males? and why in Europe is there so considerable a number of exceptions to this rule? In the Scotch asylums intemperance has been assigned as a frequent cause of the disease; and as there is more sobriety among the women than the men, it is alleged that general paralysis is therefore more prevalent among the latter. I do not believe that any necessary connex-

ion exists between intemperance and general paralysis. Nearly all the subjects of the malady whom I have known, have been men of temperate habits.

II. MISCELLANEOUS CASES.

P. M. 91.—*Pulmonary Apoplexy*.—Alice H., aged 40 years; a woman of short stature, and stern aspect; was admitted 30th September, 1853, and continued in the Asylum till her death, 8th October, 1856. She had formerly been a dress-maker, but latterly a nursery servant. She was hasty, irritable, and suspicious; and when in her fits of ill temper, few could match her in scolding capabilities. She had so strong an abhorrence of vice, as to render her denunciations of the wicked very unpleasant to the ears of the virtuous. Her head was large, and well formed, and there could be no doubt she had been a woman of unusual mental vigor.

She had been married, and had had two children, both of whom, as well as her husband, she had lost by death. She wore her character with the rough side out, for she had much kindness of heart, and sound religious feeling within. She ascribed all her misfortunes and sufferings to the malevolent purposes of those around her, and no doubt she had sufficient ideal reasons for the harshness of her conclusions. In May, 1855, she had an attack of inflammatory rheumatism, in which the heart and kidneys were much implicated. She would not take a particle of medicine until her symptoms had become very distressing and threatening, and then all at once she became docile and courteous, and received whatever was offered to her gratefully. Contrary to all expectation she recovered, but her health remained impaired, and symptoms of pulmonary obstruction appeared and gradually progressed. She had frequent attacks of hemoptysis with suffocating cough, but she would not tolerate any exploration of the chest.

On 5th October, 1856, she was seized with frightful respiratory difficulty, which was presently associated with copious hemoptysis. The face was swollen, and of a livid red hue; the breathing was

hurried, labored, and very distressing; the blood discharged was very dark-colored, and came off very copiously. The feet and legs were swollen, and the discharge of urine was very scanty. She died on the third day of this illness. The *post-mortem* was held twenty hours after death. The membranes of the brain were thickened. A number of small vesicles, containing serum, were scattered over the surface of the brain. No other morbid appearance was presented in this organ. The left thorax contained a good deal of fluid; and the left lung appeared as a mass of grumous blood, which could not be allocated, for the blood-vessels, bronchial ramifications, and parenchyma were all so confusedly engorged as to render their distinction impossible. The right lung was little affected. The heart was hypertrophied to three times its normal size. The liver was enlarged and tawny; it was firmly bound to the diaphragm and the duodenum by old inflammatory deposits. Half of the left lobe was in a state of schirrus, and a few schirrose spots pervaded the right lobe. The pancreas was small, white, and indurated. The kidneys were not larger than natural, but the inferior segment of each was highly congested in the cortical structure. The left ovary was not found; its place was occupied by a hydatid about the size of a pigeon's egg. Were the lesions met with in the brain of this patient adequate to the development of her intense and persistent insanity? Were they essential to the development of her insanity, or were they the results of it? Would more extensive disease of the brain have been compatible with active mental alienation? Would the combined morbid influences of the other diseased organs have produced insanity *without* first provoking actual disease of the brain? I use the term *disease*, in the last question, in the ordinary acceptance; and in deciding on the presence or absence of disease in the brain, from its *post-mortem* appearances, I would adhere to the same rules of pathological evidence, as are held applicable in our examinations of other organs and tissues.

P. M. 95.—*Phthisis without Cough or Expectoration*.—Maria B., long known in the Asylum as "Her Majesty, Queen Anne," and the proprietor of a medal which I had the honor of handing,

after her majesty's decease, to a lady who more than any other knows how to appreciate the feelings of the insane, Miss D. L. Dix. This patient had resided in the Asylum nearly eight years, the greater portion of which she passed constantly in bed, as she said she suffered under prolonged cholera morbus, and was always in a dying state, notwithstanding her regular appetite and general bodily comfort. She was subject to paroxysms of vociferous phrensy, in which she yelled and swore with more than majestic profanity. Her age was over sixty, but she would not tolerate any allusion to this delicate fact. There is no record of the duration of her insanity before admission. During the three and a half years she was under my care, no symptom of pulmonary disease was evinced; but in the autumn of 1856 she rapidly lost flesh, and died from apparent exhaustion on 21st November. *The *post-mortem* examination showed the following facts. The skull was devoid of diplœ between its tables. Two or three ounces of bloody fluid escaped from beneath the arachnoid, when the cavity of that membrane was laid open. The pia mater was thickened on the right side, at its superior part. The cerebral ventricles contained a small quantity of serum. The brain was in all other respects healthy. Both lungs were adherent to the ribs by strong pleuritic bands. The right lung was extensively pervaded by tubercles, and the left was completely excavated by ulcerated masses of them, though the patient had not either coughed or expectorated noticeably during life. The transverse arch of the colon was displaced, and depressed towards the pubes. The liver was tawny colored and surcharged with bile. The ovaries were shriveled and indurated, especially the left, which was as hard as if it were a calcareous deposit. The kidneys were unusually small.

The most remarkable feature in the preceding case, was the great extent and advanced stage of pulmonary excavation from tubercular disease, unaccompanied by the usual symptoms of cough and expectoration. This fact has often been noted in insane hospitals, and seems to be regarded as peculiar to the inmates of these institutions. But might not more extended *post-mortem* examination of the bodies

of the sane shew that the exemption is not confined to lunatics? The majority of insane consumptives have both cough and expectoration. Why should a minority escape the condign necessity?

The displacement of the transverse portion of the colon, observed in this case, is a fact occasionally observed in *post-mortem* examinations of chronic lunatics. I have not yet seen any satisfactory explanation of this lesion. Is it peculiar to the insane? Has the continued wearing of the strait-waistcoat, too tightly fastened, anything to do with it? May not constipation, and an overloaded state of the intestine, gradually lead to it? Other displacements of the colon, which can hardly be ascribed to the strait-waistcoat, may be observed in the abdomens of the insane. I have twice met with displacement, or elongation upwards of the sigmoid flexure, in which the short curve was as high as the arch of the colon. As to the overloading of the colon by retained indurated feces, I believe this state of the canal is not more common among the insane than with other people. At all events it is rarely seen after death. I remember only one instance, in my observation; and then the distention was chiefly in the descending colon. I have seen only one instance of displacement of any sort in recent insanity;—in this case the patient had been severely handled at home, before coming to the Asylum. I have endeavored, in other cases, to discover whether the waistcoat had been employed; but so far as related to the Asylum residence of the patients, such had not been the case. I have, however, in consideration of the liability of the insane to this intestinal displacement, a very strong aversion to strait-waistcoats; or at all events to tight ones.

P. M. 106.—*Enlarged Spleen*.—Ann McC., a married woman, aged 30 years, a farmer's wife, and formerly a maid-servant in this neighborhood; was admitted 20th January, 1857. Her insanity supervened upon child-birth, but had not a single feature of puerperal mania. It was stated to be hereditary, and she had a short attack at 15 years of age. I was informed that she had, a few years back, fallen from a height of a few feet, and that she complained of pain and weakness of the back always afterwards. I could, however,

discover no spinal curvature, or tenderness. She was silent, torpid, and somnolent. I discovered, on personal examination, that the spleen was enormously enlarged, extending to the linea alba, and within two or three inches of the left groin. Her color was perfectly anemic, but she took her meals when presented to her, and seemed neither to gain nor lose, in either bodily or mental condition.

Early in July she was seized with diarrhea, and had numerous copious, fetid evacuations of very dark-colored fluid matter; immediately after which the enlarged indurated spleen could no longer be felt by the hand. She died 7th July.

The abdomen, only, was opened. The spleen was the only organ which could be said to shew a diseased condition: its peritoneal covering was loose and wrinkled, clearly shewing its recent decrease of bulk. No topical marks of disease were observed either on its exterior, or within its vascular texture. It seemed, however, even in its then comparatively shrunken state, much congested. The intestinal mucous membrane had a dark reddish hue, but was not in a diseased state. The liver was mottled, but not enlarged, or transformed in structure. All the other abdominal, and the pelvic viscera, appeared healthy.

P. M. 68.—*Biliary Calculus*.—E. McP., aged 63 years; married, mother of nine children, wife of a farmer. This patient was reported to have been insane for six months prior to her admission into the Toronto Asylum, which took place on 25th May, 1855. It is, however, my belief that her mental infirmity had a more remote origin, but was not regarded as amounting to insanity until it assumed an aggravated form. Her bodily health had been very defective for several years. She had once been a corpulent, and apparently robust woman, but at the time of her entrance into the Asylum she had become greatly emaciated.

From the time of admission I observed that she frequently clasped her hands, with much force, over the right hypochondrium and the abdomen, and complained of severe pain. Her aspect indicated much mental and bodily suffering. She was in dread of poverty and starvation, and fancied she had been defrauded of much property.

The sight of the Asylum cows grazing on the grounds in front of the building, peculiarly excited her. She called them her own, and was in dread of their being stolen. She talked much of her own farm stock, and other domestic concerns. She was a Scotchwoman, and no doubt had always evinced the usual prudent foresight and frugal industry of her country: so that the morbid mental phenomena now exhibited might be regarded merely as exaggerations of her normal habits. The treatment consisted in generous diet, and a moderate allowance of wine, with such medicaments as the state of her digestive organs from time to time appeared to demand. The abdominal pain referred to recurred, from time to time, irrespective of the condition of the bowels,—whether constipated or the contrary. No improvement in either her mental or bodily condition was effected. On 29th August, three months after her admission, she fell suddenly into a state of alarming collapse; her legs and arms became blue and cold, and the radial pulse was scarcely perceptible; but her face was florid. She complained of her usual pain. Brandy and ammonia were administered, and artificial warmth was applied to the upper and lower extremities. In a few hours she had several copious evacuations from the bowels; she complained of great thirst, and constantly called for cold water. The state of collapse proceeded, and she expired in about fourteen hours from its invasion.

A *post-mortem* examination was held next morning. The head was not opened. The heart was healthy, excepting a slight dilatation of the aortic arch. The lungs were also healthy. The liver was tawny colored, and much softened, and its ducts surcharged with bile. The gall-bladder was greatly decreased in size, and its cavity was filled with a biliary concretion, about one and a half inches long, and three fourths of an inch in diameter. The peritoneum presented strong marks of chronic inflammation, and numerous inter-attachments of great firmness were observed. A recurrence of this inflammation had recently taken place, as was proved by the vascular turgescence in several parts. The whole tract of the alimentary canal was severely inflamed, and numerous gangrenous spots were observed in it. The kidneys were pale and very

friable, but no oil globules appeared in them. At the bifurcation of the aorta a large clot of blood was found within the vessel, which had apparently obstructed the entrances of the common iliaes. On removing this clot, fluid blood flowed freely from the aorta and the iliaes.

P. M. 85.—*Biliary Calculus*.—Helen R.; a married woman, mother of eight children; was admitted into the Asylum in December, 1846, and continued an inmate till her death, in April, 1856.

Her insanity was hereditary, and manifested itself in the form of jealousy. She was thirty-nine years old at her death, but no one would have supposed from her appearance that she was more than half that age. She must have had her children very fast, as she was only in her thirty-first year when she entered the Asylum. Before she came under my care her malady had settled into a form of chronic dementia. She passed much of her time in bed, in an almost vegetative state of existence, though at times she evinced considerable irritability and peevishness. Her aspect was quite anemic, and she was very feeble. During the last year of her existence she had become subject to periodic attacks of diarrhœa, but did not complain of any pain—a circumstance, however, to which no weight could be given, as she was habitually taciturn and unsocial. The attacks of diarrhœa became more frequent and prolonged, and required the free use of sedatives to restrain them. She was ultimately reduced to a mere skeleton, and sank from exhaustion.

Post-mortem. On opening the head the dura mater was found to be thickened and opaque. The pia mater showed great vascularity. The brain was atrophied, but no serosity of unusual quantity was found on or in it, nor were any other morbid indications beyond those mentioned observed in connection with this organ. The heart and lungs were free from every form of lesion. The liver was enlarged, and tawny-colored, and showed marks of chronic inflammation. The gall-bladder was firmly attached to the contiguous viscera over its whole surface by fibrous deposits, and its cavity was filled by a semi-transparent albuminous fluid, in which floated four loose gall-stones, (these gall-stones were composed of inspissated bile, enveloped in cholesterine,) and a fifth, weighing thirty-three grs.,

was impacted in the cystic duct. The largest of the other four weighed thirty-two grs., and the remaining three respectively eight, six, and five grs. Aggregate, eighty-four grs. The cystic and common ducts had each a calibre equal to an ordinary goose-quill.

Is it not probable that the occlusion of the cystic duct by the large gall-stone, by which the bile was prevented from entering its proper reservoir, and was therefore at times, when freely secreted by the liver, thrown into the duodenum too copiously, provoked those periodic and latterly frequent attacks of diarrhœa which were suffered by this patient? And is it not also probable that this woman suffered much severe pain on these occasions, of which, from her taciturn and uncommunicative habits, she refrained from complaining? It is beyond question that in many forms of the most severe visceral disease the insane abstain from all expression of pain, and that we are often, in our *post-mortem* sections, astonished at the discovery of formidable disorganizations which, during life, we had never been led to suspect. The uterus of this patient had undergone chronic enlargement, and was distorted by both retro-flexion and latero-flexion.

P. M. 87.—*Biliary Calculi*.—John H.; a native of Canada, aged 67 years; admitted 26th October, 1855. Said to have become insane only one year previous, and to be suicidal and dangerous. Former habits temperate and regular. This patient was in feeble health when admitted, and it was found necessary to keep him in bed. The pulse was intermitting, and on examination the heart was discovered to be enlarged and very irregular in its action. His mental tendencies were distressing to those in charge of him. He was acutely timid and suspicious, and seemed to dread every person who approached him. At times he was very noisy, and indulged in a loud plaintive chant of the most incoherent character, in which might be detected at intervals the expressions, "I will open your eyes!" "I will warm your ears!" Unfortunately he accompanied these threats by very heavy blows from both his fists on his own ears, eyes, and cheeks, and occasionally he exhibited all the usual tokens of severe pugilistic encounters. He was treated with generous diet, occasional laxatives, and cardiac sedatives. On the morn-

ing of the 25th May, 1856, seven months after admission, whilst taking his breakfast, in his usual health, he fell over in his bed and expired without a struggle.

The *post-mortem* examination showed extensive chronic thickening of the membranes of the brain, and slight deposits of serum in the ventricles and at the base. The heart was enlarged and softened, and the auriculo-ventricular valves were greatly thickened by deposits of false membrane. The liver was enlarged and tawny-colored. The gall-bladder contained five small stellate concretions, formed of inspissated bile, and weighing in all seven grains.

Few cases of insanity, characterized by strong emotional disturbance, are found unaccompanied by cardiac disease in some form or other. It may not always be possible for us to decide whether this physical evil has been the result of the mental disorder, or the cause of it, or whether it may not be merely an aggravating concomitant. High emotional disturbance in female lunatics is no doubt frequently ascribed to reflex uterine influence; yet even in these cases, functional disorder, and, too often, organic lesion of the heart will also be detected. I do not, perhaps, overrate the proportion, when I state that in one-third of all the bodies I have examined *post-mortem*, in the Toronto Asylum, dilatation of the arch of the aorta has been observed. Valvular inefficiency is more easily diagnosed during life, than detected after death. I believe it is not very frequent, though more common than may generally be supposed.

All who labor under cardiac disorder are subject to disturbed sleep and frightful dreams. The dreams of the insane are probably not separated from their waking thoughts by any very distinct or broad line of demarkation, and consequently many of their day delusions may be but the rehearsal of their sleeping phantasies. Why the old man whose case I have last described should have indulged so pertinaciously in the practice of self-punishment, is an interesting psychological question, to which I am not prepared to offer any solution. I can hardly suppose that he mistook his own head for that of an imaginary antagonist, or that he was insensible to pain.

I have another patient, much younger, a female, who indulges in

the same disagreeable practice. When the self-inflicting fit is on her, every attempt to soothe or tranquillize her but augments her rage, and provokes her to heavier blows. Is there any affinity between these cases and others in which a propensity to bite the nails, and the ends of the fingers, and tear out the toe-nails, as well as to abrade the skin in various parts of the body, is observed? To what extent, if to any, may these propensities be regarded as purely automatic?

P. M. 103.—*Biliary Calculi*.—Nancy H., aged at her decease 57, was first admitted in 1841, and is recorded as then epileptic, and of intemperate habits; but no further particulars of her case are found, excepting that she was discharged seven times in six years, and as often re-admitted. If each discharge was in the Asylum statistics equal to a cure, this woman was a valuable moveable, and her asylum history is a useful commentary on the general subject of hospital statistics.

In July, 1847, she was admitted for the eighth and last time; she first came under my observation six years afterwards, on my entrance on duty. She was then in a state of confirmed dementia, which was frequently broken by epileptic invasions of a very threatening form. For a day or two prior to each recurrence of her paroxysms, she was noisy, passionate, and dangerous to her associates, striking with impulsive fury any one within her reach, and with any implement which chanced to be at her command. When the fit of epilepsy seized her she would fall down utterly powerless; the face became frightfully livid, the cheeks, lips and eyelids swollen, and the external jugulars enormously distended. The breathing was stertorous and very laborious; the tongue protruded and was swollen and purplish. She would remain in an insensible and semi-asphyxiated state for several hours, and a troublesome cough always accompanied the recession of her paroxysm. Her general health in other respects was good, and like many other epileptics her appetite was often voracious. About ten days prior to her death, symptoms of severe cardiac and pulmonary difficulty were evinced. Her feet and legs became cedematous and livid, and distension of the abdomen supervened. Her bowels were quite regular, and there was no marked decrease of the

urinary secretion. I gave her a few doses of Tinct. Scillæ and Spts. Eth. Nitros., which were followed by copious discharges of urine; but no mitigation of the thoracic symptoms ensued. She gradually became worse; the lividity of the whole surface of the body increased almost to an inky hue, but she was quite free from coma. She died suddenly a few minutes after taking some food, and speaking as usual to her nurse and the matron.

The body was examined 27 hours after death. Its condition was that of general plumpness and obesity. The neck was remarkably short and thick. The cranial integuments were loaded with dark blood. The skull was thin. The dura mater was free from the cranium, but was adherent to the cerebrum at several spots along the summit. The arachnoid and the pia mater were both thickened, and some slight lymph deposits were seen along the furrows between the convolutions, in the texture of the membranes. The cerebrum was normally firm, and the gray and white portions were in normal relation. The cerebellum was rather soft. In all other respects the brain was apparently sound. The right cavity of the thorax was full of water, and the lung was collapsed; but no pleuritic adhesions were present. The left lung was sound, and pervious to air throughout. A few pleuritic bands, fastening it to the ribs, were found. No morbid deposit existed in the substance of either lung. The pericardium contained several ounces of water. The heart was of enormous size, and much loaded with fat. On dividing the vena cava a great quantity of blood came from below. The right auricle of the heart was greatly distended. The aortic arch was dilated to upwards of an inch in diameter, and the pulmonary artery was also enlarged. The semi-lunar and mitral valves were both incapable of closure, and had slight calcareous deposits on their margins.

The abdomen contained much water. The liver was much enlarged; it extended four inches lower than the margin of the ribs. A broad depression on its convex surface, corresponding with the margin of the ribs, and of hard, white texture, was observed. Sections of the gland exhibited a fine-speckled, granular aspect. The interspaces of the granular structure appeared as a beautiful vascular, red

network. The general color was tawny. The weight of the whole viscus was over 8 lbs. The gall bladder was thickened and contained upwards of twenty biliary concretions, none of which were of any considerable size. The spleen was very small, and extremely hard. Its surface was studded with white indurations. On section its color was a rich, dark red. The stomach and intestines were quite healthy. The kidneys were also healthy. The uterus was much larger than natural. The left spermatic vein was in a highly varicose state—its calibre being equal to that of the femoral, and from its tortuosity it had a very prominent aspect. On following it into the uterine walls it was found to continue much enlarged in its ramifications, and thus chiefly was the enlargement of the uterus accounted for. The right spermatic vessels were of normal size. The ovaries presented the aspect usual at this woman's age—they were shriveled, hard, white, and nodulated.

This patient had passed the menstrual period of life, long before she became known to me; and I can not therefore state whether she had formerly been subject to menorrhagia or not. From the chronic enlargement of the uterus, and the varicose state of the spermatic vein, I should infer that she was subject to very copious sanguineous uterine discharges. Is it not very probable that her epileptic disorder proceeded from periodic uterine disturbance? The brain presented no lesion or peculiarity which could be regarded as causative of the epilepsy; and the state of the heart was but the natural result of long continued epileptic struggles.

I have found a varicose condition of the uterine veins in several other cases of female lunatics who, during life, had been subject to menorrhagia, though free from epilepsy; and the hemorrhage has always been preceded by severe mental paroxysms, which subsided with the cessation of the uterine discharge. Reflex uterine influences certainly play a very important part in the drama of female insanity, and though they may not have been the essential originators of the malady, they very materially modify its symptoms, and they should command our most careful consideration, when deliberating on the course of treatment, whether moral or physical, which we should pursue.

PARALYSIE GENERALE. By M. H. RANNEY, M. D.

[*From the American Medical Monthly, June, 1858.*]

THIS disease has been but recently discriminated from other forms of paralysis. The attention of the medical profession was first called to it by Esquirol, within the present century. It may have been confounded, perhaps, with the results of apoplexy, ramollissement, tumors, tubercles, &c., of the brain. It is a singular fact, however, that its frequency has greatly increased during the last sixteen years, as will be seen by reference to the various annual reports of the Superintendents of American Hospitals for the Insane. In the report of the McLean Asylum, for the year 1844, Dr. Bell remarks, "I have regarded it as a somewhat curious fact, that it is only within the last three years that this disease has been admitted to this institution. As late as my visit to Europe in 1840, it was unknown within our walls; nor, after seeing it so often manifested there, can I recall any case in our register which would at all meet its characteristics, rendering it certain that it was not overlooked. Since that period, however, we have abundant evidence that it is not a form of disease peculiar to other countries."

The recent investigations by Calmeil, Foville, Rodrigues, Falret, and others have thrown much light on its nature and character. The name adopted by Esquirol does not give a correct idea of the disease. There is not usually complete paralysis, but the power of volition is partially lost, so that muscular action is imperfect and unsteady.

The characteristics of this disease are found in the paralysis, and in peculiar mental aberrations. Either the physical or the mental affection may be antecedent in its manifestation.

The first paralytic symptom is an affection of the muscles of the pharynx and larynx, which changes much the tone of voice, and produces a difficulty in articulation. There is a peculiar "cracked,"

husky tone, and a hesitancy between syllables and words, like stammering. A slight excitement produces a spasmodic action of the muscles of the face, particularly about the corners of the mouth and eyes. The tongue when protruded is tremulous, and thrown forward by successive efforts resembling the spasmodic action observed in chorea. The face becomes expressionless; as the disease progresses all of these signs become more marked, and a difficulty occurs in locomotion. The patient totters in his gait, and if he attempt to change suddenly his direction, is likely to fall. In falling he makes no apparent effort to recover himself, and his head strikes with equal force as other parts of his body. Deglutition is gradually impeded, and eventually there is a loss of control over the sphincters. In most cases epileptiform convulsions follow at intervals, varying from one week to three months, each of which seems to lessen the vital power of the system, and to increase, temporarily at least, the extent and degree of the paralysis.

The mental changes are marked both in the susceptibility and intellect. The patient is restless, constantly moving from place to place, peevish, fretful, and impatient of contradiction. He is ever discontented with his present condition, although the past and future afford unalloyed happiness. Opposition to his wishes is soon forgotten. Recent events are generally but feebly retained, while the past affords to his mind images of unparalleled success, and the future glows with day-dreams of great achievements to be performed, or noble actions done. The disease may assume the form of mania, monomania, or dementia. The most prominent and usual characteristic is generally exaltation of the imagination. The belief is permanent, that he excels in every thing, and possesses strength, wealth, influence, and intellectual capacity far beyond that of any human being. They who were previously endowed with a brilliant imagination, and had received high mental culture, present visionary schemes of the most attractive character. Their language is well chosen, and their style highly poetical. They project ships on an immense scale, and palaces of pure gold, control kingdoms, and discover the secrets of Providence. Great subjects alone occupy their

attention. The following extract, from the register of the N. Y. City Lunatic Asylum, illustrates this phase of the disease. The imagery of the delusions is entirely that of the patient, and his style and language is retained as far as practicable.

"H. H., born in Virginia, aged 32, admitted 1853. After receiving his degree at Yale, he was supplied with an abundance of money, and unrestrained in the gratification of every desire. His funds becoming exhausted, he endeavored to obtain a living by his own exertions, but with indifferent success, on account of the impairment of his mind and health through the influence of his former habits. His system is very feeble, and a large ulcer upon one of his limbs renders him almost helpless.

"The imagination of H. H., naturally active, is morbidly exalted. He believes himself to be the 'Earl of Warwick, the King-maker,' and adds to the singularity of the delusion, by the conception that he is fourteen feet high, and large in proportion. He wishes to purchase the asylum and all its contents, proposes to bestow the most magnificent presents and the most extensive estates upon the physicians, and signs papers to that effect. Nothing is beyond his reach by reason of its expensiveness; nothing to good for his friends. His clothes are of the finest cloth, lined with the most costly satin, decked with intricate embroidery, and ornamented with buttons of enormous diamonds. For him magnificent pictures adorn the walls of mansions which the highest architectural skill has reared. The souls of Praxitiles and Canova shine through the marble monuments of their art which fill the corners of his libraries. Through the stained-glass windows, shaded by the heavy folds of Genoa velvet, the light falls upon the most rare editions of the works of those men whose literature is eternal.

"Carpets, the delicacy of whose tints rival those of the summer cloud at sunset, cover the floors of his apartments. Tables inlaid with precious stones which cause the envy of the brightest stars of heaven, uphold wines sparkling upon the brim of golden goblets, as if anxious to kiss the lips of the drinker, and viands which have been prepared with the consummate skill of the highest culinary

art. Flowers of supernatural beauty, whose delicate perfume angels might use on their spotless garments, fill his conservatories.

"Among the spreading branches of the trees of his pleasant gardens birds of brilliant plumage and unrivaled song pour forth their sweet voices in harmony with murmurs of fountains, whose silver-edged bubbles ripple over pearls and garnets, and whose banks are clothed with the herbage and verdure of the tropics."

Even they who previously possessed but little imaginative power evince now the most lively conceptions. Matters of common occurrence may occupy the attention, but are so vividly and fancifully described as to render it difficult to detect the real nucleus of fact. The exhilaration produced on certain individuals from stimulating drinks bears some resemblance to the expansive ideas in this form of paralysis. These delusions continue until the disease has progressed to a low state of dementia. There is an occasional exception to the general rule of exaltation. In such cases the mind seems depressed and enfeebled from the commencement of the attack, and the paralytic symptoms are very strongly marked.

The presentation of symptoms and the diagnosis being the principal object of this paper, I select a case from Esquirol, in which the prominent characteristics are given. "M. L. D., thirty-eight years of age, had participated in the last campaigns of the empire, and was elevated to the rank of colonel after the restoration; uniting to every physical and intellectual quality all the advantages of a lofty position in society, and a large fortune. He was of the opinion that he had experienced injustice on the part of the government. His self-love was deeply wounded, and after many days of insomnia he gave himself several thrusts with a knife in the region of the heart. He was promptly succored, and his services were but for a brief period discontinued. From this time he expressed with bitterness his dissatisfaction, but was in no respect less exact in fulfilling his duties as a commanding officer. Two years subsequently he has an attack of cerebral congestion, for which he is largely bled. Two days later he has a second attack, more severe than the first. He remains excited, talks much, is agitated, irritable, and exacting. He does not sleep,

and after a third attack a true mania is developed. The delirium is generally attended with agitation, and notions of grandeur and fortune. He commits a thousand extravagances, remains almost naked, talks incessantly, cries aloud, orders a thousand things at once, is impatient, and commits strange and imprudent acts which compromise his life, though he entertains no idea of suicide.

"Several physicians are called in consultation, and the maniacal state of the patient can not be denied. His age, however, and the brief duration of the disease, offer to the counselors expectation of a cure. I affirm that the patient will never recover; 1st, because three severe attacks of cerebral congestion had preceded the maniacal state, and that, consequently, there was some degree of cerebral lesion; 2nd, because, notwithstanding his excessive loquacity, certain words are imperfectly pronounced, and because his gait, although lively and active, is uncertain. I added, that active medication would hasten the progress of the disease; that the country, exercise, a severe regimen, and the repeated application of leeches to prevent new congestions, appeared to me to be the only proper course. One of the consulting physicians did not concur with me in my unfavorable prognosis, and proposed certain tentative measures.

"After a month spent in fruitless attempts, we were obliged to renounce all hopes of cure. Paralysis had progressed, and dementia was confirmed—the patient retaining incoherent notions of grandeur, which persisted for more than two years. He regarded himself as the possessor of several provinces and kingdoms; distributed palaces, and gave away millions, and commanded also an army of giants. His cavalry was mounted upon horses of gigantic size; he possessed palaces of diamonds, and his stature was 20, 30, and 40 cubits in height. He talked both night and day; now in a low tone, now loudly. He also uttered loud cries. Beseet by hallucinations of hearing, he listened to the voices of imaginary beings, and replied to them, boasting of his person, disputing with and even abusing them. He recognized the members of his family, and addressed them with amiability and politeness; but after a brief interval, however, resumed his habits of constant conversation. He was sent into the country."

Paralysie générale occurs more frequently among males than females; in fact, among the latter it is of rare occurrence. No good reason has been assigned for this—the predisposing and exciting causes to which the disease is referred being found in operation in both sexes. At Charenton, of 619 insane (366 men and 253 women) there were 109 cases of general paralysis, (95 males and 14 females.) Into the Asylum at Halle, in the Tyrol, 257 men and 181 women were admitted, among whom were 28 cases of general paralysis, (22 men, 6 women.) In the New York City Lunatic Asylum, of 5,092 (2,391 men, 2,701 women) under treatment within the last eleven years, 85 deaths have occurred (76 males, 9 females) from this disease. It is a disease of adult life, rarely occurring before the age of twenty-five. Those of a sanguine temperament are more liable to an attack, especially if of a full habit with a tendency to apoplexy. It occurs to a great extent in the class called *good livers*, who remain up late at night, and indulge in suppers with a free use of wine, the mind at the same time being actively engaged. Venereal excesses, a free use of mercurials, syphilitic diseases, a hereditary taint of insanity, or scrofula—in a word, every thing that tends greatly to deteriorate the blood, impair the constitution, or lessen the vital power of resistance, may act as a predisposing cause. The exciting cause is generally some sudden mental shock—a loss of friends or property, great anxiety in business matters, or it may be an indulgence in very great excesses. There are various diseases with which it has been and may be confounded. “*Ramollissement du cerveau*” has some symptoms in common with it; but the continued pain in the head, occasional vomiting, rigidity of the flexor muscles of the limbs, and stupidity instead of exaltation of intellect, seem sufficient to distinguish it from general paralysis. In the last-named disease there is also a softening of the brain, but it is the cortical portion that is particularly affected, and this gives rise, usually, during its progress from irritation to softening, to the peculiar mental symptoms that have already been described.

Cerebral hæmorrhage is usually accompanied by paralysis of a

hemiplegic character, and its sudden invasion with the ordinary apoplectic symptoms is a distinguishing feature in its diagnosis.

Inflammation of the brain or its membranes, as well as the affections of the spinal cord, might lead to error from superficial examination, but the rapid progress of the one, and the paraplegic character of the other without any peculiar mental aberrations, would indicate the nature of the disease. Delirium, arising from inflammation, differs essentially from delusions. There is generally a low condition of the system; the mind is not occupied with external objects, but seems to retire within itself, and in a half comatose state is manifested by incoherent mutterings, without ever exhibiting the reasoning power of insanity.

Paralysis caused by mercury, alcohol, or lead, may be distinguished by a careful study of the causes and symptoms, the muscles of the extremities being in these cases at first affected either with numbness, trembling, or a complete paralysis of the extensors.

Morbid growths of the brain, such as tumors, (malignant and non-malignant,) tubercles, &c., present many features in common with general paralysis. The character of the morbid growth can be inferred only from the particular diathesis, or by the external manifestations, the paralytic and mental conditions involved in them depending principally on compression and inflammation, with its sequences. The change occurring in the mental faculties is that of general enfeeblement, presenting eventually the ordinary characteristics of dementia. The last stage of general paralysis closely resembles this, and its discrimination requires a knowledge of the previous history, and a careful analysis of the successive order of the paralytic symptoms.

The following is selected from the case book of the New York City Lunatic Asylum, as an illustration of this error in diagnosis. It had been considered as the effect of a morbid growth in the brain, previous to admission. "C. L. S., et., 36, by profession an actor, was on the 10th of December, 1856, admitted into the Asylum. When admitted, he was found to be completely demented, paralyzed, unable to walk or stand, and with difficulty to swallow. He lingered nine days, when the disease terminated in death.

"The following history of the case, communicated by his brother, together with the *post-mortem* appearances of the brain, indicate the form of the disease of which the patient died to have been *paralysie générale*. His brother states that he had always been a temperate man. Some two years since, in consequence of domestic and business troubles, he passed through a period of great mental anxiety and excitement.

"A year ago last October, while in Philadelphia, he exhibited strong symptoms of insanity of a maniacal character, succeeded by a condition of prostration. Soon after recovery of physical health, a change in his character was noticed; he became irritable, impatient of contradiction; at times despondent, and then very sanguine of success in his profession and business. His time, following such recovery, up to April last, was spent in forming business plans, and studying the important characters of Shakspeare, in the belief that he was to become a prominent actor, although his friends knew him to be incompetent in this respect from the great impairment his memory had lately suffered. When slightly excited, twitching of the corners of his mouth and tremors of the muscles of his face were noticed; his tongue was protruded with difficulty, and his voice altered and 'cracked' in its tone. All of these symptoms increased in intensity about the beginning of April last, when, on the 8th of that month, he had a convulsion of an epileptiform character, as described by his brother, followed by prostration. From this, he afterwards gradually improved until August last, when he had another severe convulsion, followed by loss of consciousness. For several hours previous to this last convulsion, it was noticed that his left arm had become paralyzed. He was then taken to a hospital, and for a short time improved so as to be able to walk about the ward, and regained considerable power in the use of his tongue and arm.

"During the four months he remained there, his brother states that he had several convulsive attacks similar to those already mentioned, followed each time by increased helplessness and greater loss of mental power, until he became reduced to the condition in which he was brought to the Asylum. Autopsy fourteen hours after death:

skull a quarter of an inch thick, and of a texture less dense than usual; dura mater and arachnoid closely adhered over summit of cerebrum; arachnoid thickened, and presenting an opaline appearance, with serum between it and pia mater; general appearance of brain atrophied; the cortical structure somewhat softened, and easily scraped with the knife or finger-nail from the white medullary substance; this latter was found to be hardened, of firm texture, and glossy in appearance; the ventricles were largely distended, and contained $\frac{5}{16}$ of clear serum; the floors of both lateral ones had a feeling of roughness to the touch; the foramen of Monro was large and patulous, easily admitting the end of the little finger; the middle or soft commissure was wasted to a thin ribbon of almost transparent membrane; the pons varolii and medulla oblongata were of less than usual size, and the pituitary gland shrunken, and the upper portion of its peduncle enlarged. The weight of the brain, drained of the serum in its ventricles, was two and a half pounds, which is some ten ounces less than the average given by Solly."

The most common pathological change in *paralysie générale* is a softening of the vesicular neurine of the brain, especially in the anterior portion of the parietal regions. Sometimes the tubular neurine is also involved. Various other changes are occasionally found, such as thickening of the membranes, effusion of serum, induration of the cerebral substances, &c., but with no particular uniformity; and these, in fact, are found in many of the chronic diseases of the brain. The length of time in which the disease has progressed, must necessarily vary the cadaveric phenomena, and if death occur very early there may be no manifest softening; yet from this it does not follow that it has not been in progress, that there is no organic detritus. Either a subjective cause like over-excitement of the mind, or an objective one like intemperance, or moral and physical causes combined, may over-stimulate the brain, and its continuance result in congestion, from which condition serum may be effused into the primitive cellules, causing irritation that may or may not end in softening. Why softening follows in this form of paralysis, but not in ordinary congestion, is not well settled. It may depend either

upon some particular predisposition on the part of the patient, or upon some unknown peculiarity of the disease.

The prognosis is highly unfavorable. Rodrigues mentions a few cases of recovery, but by most the disease is considered incurable. Death follows, generally, in from one to three years after the first symptoms appear, but life is occasionally prolonged beyond the last-named period. If it occur early in the disease, the termination is usually by epileptiform convulsions; if at a late period, from general exhaustion, or disease of some important organ other than the brain.

The object of this communication being merely to call the attention of the profession to the general characteristics of this form of paralysis, I will not dwell upon the subject of treatment.

M. Rodrigues recommends the adoption, at an early stage, of active measures, such as frequent venesection, &c. After the disease is somewhat advanced, he advises the occasional abstraction of blood, in connection with tonics, aromatics, and cold baths, while at a later period he recommends laxatives, and revulsives to the skin. The treatment of M. Rodrigues has not been found successful when adopted by others, although he gives a very favorable account of its results.

The observance of general principles of treatment to meet the indication of the symptoms has seemed to be attended with as much benefit as the adoption of any other system. I have seen more temporary good effects follow the use of a seton, or the free application of Ung. Tart. Ant. to the back of the neck, than from any thing else in the way of treatment. If at a very early stage the habitual excesses which had partially undermined the system were corrected, and a careful hygienic course pursued, some hopes might then be entertained of a gradual restoration.

TRIAL OF ROBERT C. SLOO, FOR THE MURDER OF JOHN
E. HALL. DEFENCE, INSANITY.

On the 11th day of November, 1856, Robert C. Sloo, of Shawneetown, Gallatin county, Illinois, in the daytime, killed, in the presence of five or six persons, by two pistol shots, John E. Hall, clerk of the circuit and county courts of the same county, while engaged in his office with another person, in official or other business. It was done quietly, without a word spoken or any sign or act to intimate his purpose. The first shot was given in Hall's neck, and the second, as he turned convulsively, in his bosom. He expired immediately.

The grand inquest of the county found a bill against Sloo for willful murder, and the indictment was tried in the circuit court, held in the county of Gallatin on the 20th day of July, 1857, by Wesley Sloan, presiding judge.

By consent of all the parties, Henry Binmore, of the *Missouri Republican*, was allowed to be a reporter of the proceedings; and it is from his report, printed by George Knapp & Co., of St. Louis, in a pamphlet of 153 pages of small and almost unreadable type, that we make an abstract of the case.

It took eleven days to impanel a jury of twelve men to try it. New York fashions of administering justice do not seem to be tardier in reaching the rural districts than New York fashions of dress; and people in Illinois are quite as prone to read newspapers and indulge in crude and hasty opinions, as the denizens of the Five Points and the purlieus of the City Hall. It would seem that in this country, to be a jurymen in a criminal case, requires an abstinence from the acquisition of news, and the expression of conclusions on what one hears or learns, that in Athens would have been odd enough to subject a man to the suspicion of being unfit, from that very cause, to sit upon a jury, or do any other thing that required a knowledge of what was going on in the world.

But it is for the legal profession to say whether the various panels summoned in this case of Sloo were properly challenged and rejected or not. Our province is confined to the consideration of the case after the impanneling of the jury, and when the plea of the insanity of Sloo is presented for his defense.

The death of Hall by Sloo's hand was at once admitted on the part of Sloo's counsel. The proof of it, submitted to the jury, is satisfactory on that point.

The homicide being admitted, the only defense interposed was insanity.

To prove this defense, Dr. Herod, the physician of Sloo and his family, was called, who testified that he had been a practicing physician twenty years, and had known Sloo since he was a boy, but not particularly until 1851. In the spring of 1852, Sloo consulted him respecting a disease which distressed him, technically known as spermatorrhœa. The witness prescribed for him "off and on" for that disease until the latter part of 1854. He advised Sloo to leave home, and consult physicians more conversant with that particular disease. This Sloo did, and was absent twelve or fifteen months, but returned worse rather than better. His disease made its eruptions sometimes once or twice every day, and sometimes two or three times a week, and the result was indigestion and costiveness, (requiring the constant use of aperient medicines,) together with weakness of the knees, jerkings of the thigh, pains in the back, and frequent urinary inclinations.

As to the effect of the disease, Dr. Herod testified that of course the nervous system would suffer a great deal by it; that it would produce general debility of the lower members of the body; that he at one time, in 1854, found Sloo laboring under what is termed a congestion of the brain, but more probably approaching epilepsy; that two or three months after that, he was attacked in a similar manner with a strong determination of blood to the brain, his face flushed, his teeth set, his eyes restless, his breathing difficult, his hands cramped, and the muscles of the face slightly twitching.

Dr. Herod further testified that Sloo, between 1851 and 1854,

went to his office to consult him respecting his disease, every two or three days, and sometimes every day, manifesting great concern about his case. Towards the latter part of their intercourse the doctor observed that Sloo avoided him, crossing the street to do so, and passing without speaking, which was unusual. This conduct was continued for about three weeks, with few exceptions, before the alleged murder, Sloo avoiding him as if they had quarreled. Sloo complained frequently to him that, on stooping down, he felt dizzy—his head swayed; that he had a pain in his head “pretty generally all the time, sometimes worse and sometimes better.”

On his cross-examination Dr. Herod stated that this was the only case of spermatorrhœa he had ever treated, and that his knowledge of it was chiefly derived from Lallemand's treatise, as anglicized by Wood, which he read frequently while he was prescribing for Sloo; but that he had also perused a pamphlet treatise on the same subject, the author of which he could not name. The Doctor's knowledge of the actual existence of the disease in Sloo was derived from Sloo's communications to him, and from an examination, on one occasion, of the sheets of Sloo's bed, the stains or marks on which corroborated Sloo's communications, and satisfied him of the reality of the disease. His prescriptions were cold applications, aperients, and gum camphor, as recommended in such cases.

Dr. Herod further stated, in the course of his testimony, that Sloo was of a sanguine lymphatic temperament, tolerably susceptible to medicine, except as to his bowels, which were prone to costiveness.

In respect to insane delusion, Dr. Herod stated as follows:—

“Had a conversation with Robert about a week before the homicide; I was feeding my hogs one morning when Sloo approached me where I was and asked me if I had a pistol; I told him I had not. He then asked me if I had a bowie-knife; I told him I had not either, and asked him finally what he wanted with it, and he said he supposed he had to take a licking; and I then asked him who it was that was going to lick him, and he said a gentleman down town. I asked him who it was; he refused to give me any name particularly, but said it was a gentleman down town, and as he hurried away from me he turned a little back and remarked to me that he had called upon the editor of the paper at Marion, (I

forget his name,) the editor of the *Intelligencer*, and had called on him or written to him to demand the author of these articles that had been written in that paper some time before; and I remarked to him, said I, 'Robert, you had better leave that thing alone; it will come out on some fellow that is not responsible. It is easier for you to let it alone.' He remarked to me back again, that in case he found out who the author was, that the two could not live in the country together, or something of that kind. I neither gave him a pistol or a knife; I had neither. I do not know that he came to me specially; I was coming out of the gateway, and he was coming through the alley towards his house."

He was re-examined on this point, and we give his testimony from the report:—

"Q. You say that Robert Sloo called to see you shortly before this event transpired, and spoke of the publication of articles in the *Marion Intelligencer*? A. Well, yes. He spoke of it in this way. After the conversation that I repeated, he remarked to me that he had written and demanded of the editor the author of this publication.

"Q. I want you to tell me all he told you of these publications, what they were, and what they contained, as near as you can recollect them, and what he understood them to mean? A. When I spoke back to him about this thing, that it would come out on some fellow that was irresponsible, I would care nothing about it, he immediately remarked further in his conversation that he considered his family, especially his mother and sister, slandered. As near as I can recollect, he stated that the articles were dishonorable, and reflected dishonor upon his mother and sister. I cannot recollect the words he used.

"Q. Did he say anything about their reflecting upon the chastity of his mother and sister? (Objected to and ruled out.)

"Q. State, if you can, what was the language used by Robert when he spoke of that publication? A. I cannot recollect the precise words, as near as I could get at it, it was that the chastity of his mother and sister had been assailed. I saw the articles which he referred to and think I should know them again.

* * * "I think that he used some such words as that the chastity of his mother and sister was attacked in those articles; he said he had read them. Those are not the precise words he used, but they are, as my notion goes, the substance of what he said—probably a portion of the words themselves and probably the meaning of other of his words."

The newspaper articles referred to are very severe upon the political and private character of Sloo's father, and although they impli-

cate the family generally as extravagant, aspiring and pretentious, we cannot find a word that touches the chastity or good moral character of the mother and sisters. Further on, as we proceed in the regular course of the testimony, we shall give some extracts from these articles, to show their general tenor, and their particular application to Sloo's family, and how they give occasion to Sloo's alleged insane delusion.

The father of Sloo was then called to the stand; and as his testimony seems to have been very fairly and intelligently given, and in a cool and dispassionate manner, we extract largely from it.

"James C. Sloo called and sworn. Examined by Mr. Davis, says:

"I am father of the accused; he is something over 24 years of age—in his 25th year. He remained at home until he went to school. He subsequently went to West Point, returning thence I think in 1851. He remained at home from that time until 1854, having no particular business, but sometimes reading law at home, and sometimes at the offices of Messrs. Freeman & Olney.

"His general health has not been good for several years prior to his leaving in 1854, and my attention was particularly called to his condition by himself and Dr. Herod in 1853, say in the summer or early part of the fall. As made known the disease was entirely new to me; it was the involuntary flow of *semen*, as stated by Robert and by Dr. Herod. At that time, and very often since, he had chills, or what seemed like congestive chills. From 1853 to the close of 1854, I suppose he must have had ten or twelve or more of these attacks; some were not so severe as others. In those which were more severe and which amounted to spasms almost, I noticed a cramping of the hands, so that you could not move them but by force. At the coming on of the attack the feet were very cold, and there was a slight twitching of the muscles of the face. During the convulsion the appearance of the face changed a good deal, sometimes it would be red, then change to purple. His lips seemed to contract, and to some extent his eyes had a glassy and unnatural appearance. These convulsions were more severe towards the latter part of 1854.

"When he left in 1854 it was by advice of his physician mainly, who thought a change of climate would be beneficial to him, I think. I do not think his condition was looked upon as critical at that time. During the spasms he was very bad, and Dr. Herod, while the two in which he attended were on, told me that he might not survive, and that I must not be astonished if he died while they were upon

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him. So far as he informed me, when he left in 1854, he had two points of destination in his mind, one was Alton and the other was Springfield. He went to Alton but not to Springfield. When he left he had no property except a library of books which he had collected together, and which had been donated to him by an uncle in New Orleans, and his clothes. There were two boxes full of books. I cannot say positively how long he remained at Alton; he stayed only a few days, I think. He had his books put up at auction and sold. He had intended to practice law at Alton or Springfield. His books were sacrificed completely. From Alton he went to St. Louis, where the money he got for his books was stolen from him or lost. He then called on Mr. Davis for means to enable him to get to New Orleans, and lost that money, as he said, in the Republican office, or in that part of the city. He then went on board a boat as a passenger for New Orleans, and when he got there he called on his uncle who paid his passage. He must have got to New Orleans in December, 1854, or January, 1855. He remained there until sometime late in the spring, or the early part of the summer, when he accompanied the family of my brother to Boston, Mass., and thence to Liverpool, in England. I cannot say how long he remained there; it was about two months. The next we heard from him was by a letter to his sister from Charleston, South Carolina. I cannot find that letter at this time, although I have hunted for it in all usual places. In that letter he stated that he had become dissatisfied and unsettled in his mind, and had returned to the United States. He spoke of his general health not being good; he said his limbs were affected, and at times he could hardly walk. I think he spoke also of returning home.

"The next I heard of him, we received a letter from Columbia, S. C., written by a gentleman named Hogan, stating that he had been to his house.

"[Letter A, signed by Vincent Hogan, shown.]

"This is the letter I received; it came to me bearing the postmark of the place where it is dated, in due course of mail.

"[Letter offered in evidence to show the whereabouts of defendant at that time. Objected to, and objection sustained. Exception noted.]

"I received a letter from Mr. Hogan in relation to Robert, dated at Columbia, in South Carolina. I have received one since about him, and others, members of my family, also received such letters. I answered the letter shown by return of mail. I received another letter dated 25th January, 1856, by due course of mail, from Columbia, S. C., and so postmarked. This third letter is to Robert's mother, from the same place, written by a female; it is dated March, 1856, and is in relation to the conduct of Robert. Heard nothing of him about this time, excepting by these letters.

"[Offered to read these letters; objected to, objection sustained and exception noted.]

"I never heard of the writers of these letters until I received their communications. They have written since his return home. Robert came home in the summer of 1856, or during the latter part of the spring.

"From Columbia, S. C., I understood he went to Milledgeville in Georgia. There he assisted the Clerk of the Legislature. After that he joined the company of Col. or Capt. Buford, with the view of going to Kansas. I learned from him, since his return, that while he was at Milledgeville he consulted a physician about his disease; he added that the treatment had injured him. From Milledgeville, I think, he went with the company to Mobile, Ala., and from there to New Orleans.

"At New Orleans he made known his intention to his friends; they used every kind of argument to induce him to return home. He did not get to the boat in time to go to Kansas, and all his clothes were taken off; since that time we have not heard of his baggage; he did not stay at New Orleans, but shortly after came home; he told me he went from Charleston to Columbia on foot, and arrived there in a destitute condition, being almost naked and barefooted; he said that the family who wrote me seemed to sympathize with him; he staid with them several weeks, and Mr. Hogan then, when he would go, gave him the means by which to get to Milledgeville. He has since told me that the disease still continued on him during this tour, and that he got medicine at Milledgeville which seemed to increase it. Some time after he returned home he took an office on Front street; he slept there part of the time; he kept his office from five to eight weeks, but spent much of that time home. Frequently conversed with him about his disease; he would often speak to me about it; he said that this disease was sinking him, taking away the substance of his life; complained much of general health, and said his condition was such he had very little to live for, and unless he could be cured he preferred death; he complained of pains in his head as a general thing, the back of his neck and back, about the loins and kidneys. The pains in his head were of frequent occurrence.

"He complained much of costiveness. Inflammation and constipation of the bowels was his usual complaint. Applications of cold water to his head were constantly made by members of my family. They poured bucketfull after bucketfull of water on him for days without intermission. That is a matter of public notoriety. During the summer he remained at home pretty much, inactive. He would employ himself reading and writing. He was inclined to sleep, I think, more than is usual in persons of his age. In this respect there is a perceptible difference between his present inclinations and what they were at the age of twelve.

"When he left home in the day time he sometimes went to town, but he did not seek company, but rather seemed to avoid the crowd. When he did not go to town he would go to the woods and sit up about Mr. Sexton's house, or in some other retired place.

"To the Court—I am now speaking of the summer and fall of 1856.

"To Mr. Swett—This conduct ran all through that summer and fall."

"*Examination in chief resumed.*—I have noticed his linen often; his washing was done with the clothes of the family, by a colored woman, who sometimes did the washing at our house; he generally wore a night shirt when he slept, and on these I have seen stains, as also upon his day shirts; I noticed this pretty often; I never paid much attention to this thing until the latter part of 1854.

"As a general thing Robert would, when he left home, go above town and sit in the shade; sometimes he took a book with him; he would sit there from breakfast to dinner time, and after dinner go back again and sit till supper time; have heard him complain of his back and thighs; these complaints used to be of sharp pains; he frequently spoke of a ringing in his ears; I do not recollect to have heard him make special complaint of weakness of the limbs; so far as I observed, all his linen was stained, more or less; I reckon I examined at least once a week, and perhaps oftener; from these examinations I should judge that the disease was increasing on him.

"I remember the publication of articles in the *Marion Intelligencer* and the *Benton Standard* respecting myself and family; I remember that they came to the knowledge of my son; in one of the articles my wife and daughter were mentioned.

"Q. Do you know from any conversation with Robert, the construction that he put on those articles, as to what they were intended to convey?

"Objected to. Object of inquiry to show the construction placed by defendant on the article, to strengthen the plea of insanity.

"Objection overruled.

"Q. Mr. Sloo, did you have any conversation with your son Robert in reference to the article named?

"Yes sir, I had such a conversation with him. As far as I can recollect he said that it reflected upon the character and integrity of his mother and sister. He spoke in a candid and emphatic manner in regard to his sister especially. He said it would have been better that they had gone to their graves, than that they should have survived a charge like that, made publicly, in the columns of a newspaper; of course he meant that it reflected upon their chastity and propriety of character as females. I can not tell precisely how long this was before the homicide. My attention was called to the arti-

cles at a fair at Equality. I did not see them for some days afterwards. It must have been from the middle to the last of October. We had but one general conversation that I now recollect where this was mentioned. He seemed to dislike very much to refer to the subject; it excited him. He did not at that time tell me who he thought was the author of the articles. He had some doubt on his mind as to the real author. He told me he wrote to Mr. Jones, whose name was at the head of the *Marion Intelligencer* as editor at that time. I should know these articles again if I saw them.

"(*Marion Intelligencer*, dated October 10, 1856, shown witness. His attention being called to two communications, signed respectively 'Vindex' and 'Truth'.)

"Those are the articles I referred to.

"(Articles offered in evidence. Objected to. Allowed in so much as relates to the subject, provided it is understood as proving provocation.)

"*Direct examination resumed.*—I first learned Hall was killed a short time after the occurrence. I was at home when I heard of it. I came out immediately and started down street to town. When I got down the street I saw Robert with Mr. Freeman coming in the direction of my house. I kept on my course this way. On their road up and after we met they were joined by some three or four other persons, Mr. Rowan perhaps, and Mr. Sexton perhaps. I suppose we met about one hundred or one hundred and fifty yards this side of my house.

"Q. Tell the conversation that was had there, as fully as you can? (Objected to and objection overruled.) A. As a matter of course I was very greatly astonished, and so, I suppose, was everybody else. I can't say what was said by the crowd generally, for they were all making their own remarks about it. Some one made the suggestion to Robert that he had better leave. I can't say who that was. Robert replied that he would not go; that he would not fly his country; he had nothing to flee for. He said that in an emphatic manner, and then it dropped. He went up, and I thought he had gone into my house, but I found afterwards that he had gone to Mr. Rowan's; he remained there between half and three quarters of an hour, until Mr. Davenport (then Sheriff) came up, and then he came out and gave himself up. He was then taken to Mr. Bowman's office; he remained there a short time, and from there he was removed to the Clerk's office; he remained there awhile, and from there he proceeded to jail.

"Q. What has been the state of Robert's conversation in reference to the trial since he has been in jail. A. I have had no conversation with him at all. I visited the jail but seldom, and when I was there I was generally in the presence of the keeper of the jail. Messrs. Freeman and McAllen interested themselves about his de-

fense, and I have assisted them as best I could. Robert had never sent for me, or made a single suggestion about his defense or any part of it.

"CROSS-EXAMINED BY MR. ALLEN.

"It may have been in December, 1854, that Robert went to Alton; his health had been bad all the season. He took much medicine during that season; he used a good deal of blue mass and oil, and occasionally Cook's pills. He may have taken gum camphor.

"Robert has mixed some in society, but he has not been one to seek it a great deal. Within the last few years I think he has been more reserved than formerly; more disposed to seclude himself and withdraw from society. He was not down town every day during the summer of 1854. I think there would be weeks at a time when he did not come down, and this when he was well enough in health to be about. I can not say if he went into the society of ladies during that time.

"Q. With reference to this matter spoken of a moment ago, I would ask you to state to the jury, if you gave the same construction to those articles that Robert told you he did? (Objected to and ruled out.)

"I can not say what I said to Robert in the conversation I have spoken of; it was held about a week before the election. I put the same construction on the articles that he did. I state that without hesitation. I expressed that opinion to Robert.

"I heard of the killing by my little son who lives with Mr. Inman. When I met Robert he did not speak to me, and we had no further conversation than that I have related. I never had any reason to expect the killing. I was as much surprised as any man in town, I guess. I never knew that he had a pistol. We kept no weapons about the house at all. I did not hear him say where he got it.

"In July and August he was laboring under this disease, before spoken of.

"I should say that Robert is a domestic young man, to some extent, having strong attachments towards his relatives.

"Rebuttal by Mr. Swett.

"I think Robert was generally quiet and amiable; he may have had 'fusses' with boys at school, but I do not remember his ever getting into any trouble. During last summer he had a great many schemes started as to what he would do.

"Orville O. Sexton, called and examined by Mr. Davis, says:

"I have been acquainted with defendant pretty much ever since he was born; he has been rather reserved in his habits; have been intimately acquainted with Robert; I have seen him during last summer retiring from society to the woods by himself; when I have seen him he has been sitting by himself; he would go and sit alone

for three or four hours ; sometimes he had a book with him ; I never approached him as he sat ; have seen him sitting in this way perhaps a dozen times, perhaps more ; he would sit on a log, or by a tree ; would be breaking sticks and whistling.

"I have seen two articles published about the Sloo family. Had a conversation with Robert about these some days after they appeared. He stated in reference to the one signed 'Truth,' that so far as the men were concerned he did not care so much, but he thought it was an attempt to slander his mother and sister, and sink them into infamy ; he spoke of them as imputing misconduct on the part of his mother and sisters. He read the language over and over several times to me, in reference to its force as to the chastity and integrity of his mother and sister as virtuous women. He said he thought John E. Hall wrote them.

"CROSS-EXAMINED BY MR. ALLEN.

"Have been intimate with defendant all his life. He was always somewhat reserved ; that is, he was probably more studious than most other boys. Sometimes when I saw him in the woods he would be reading, and sometimes not.

"Stephen R. Rowan called and examined by Mr. Davis :

"I have known defendant since he was a sucking baby. I have lived in this town thirty-five years, and have known him all the time, except when he was at school or absent from home. For the past year or two I have lived very close to his father, there being but an alley of about forty feet between us. I was not a great deal with defendant during the summer of 1856 ; he kept rather to himself, and was not much in my family. I have heard him complain of pains in the head. He would come over to my well, sometimes, after midnight, and draw fresh water and put it over his head. I asked him why he was not asleep, and his reply was, 'Mr. Rowan, I can't sleep, except a little before day.' He did not say what was the trouble with him. I have seen his little sister pour water on his head in the morning.

"Where I heard of the homicide was down in town, within sixty or eighty yards of the place, shaving ; when I was about through, I heard a man hallooing for a doctor ; I stepped to the door and asked 'What do you want with a doctor ?' The man remarked, 'Bob Sloo has killed Hall.' I ran hard down there. I heard no gun. I went into the office, and found the man was killed sure enough. I returned up home, and concluded and told my wife I would assist in removing the corpse to his residence. On my way down I met Sloo and Mr. Freeman coming leisurely along towards my house and his father's residence. As I passed, I said, 'Bob, in the name of God how did this happen ?' He remarked, 'I walked into the office and shot him.' Some person—I don't know who it was, several were there—said that he had better be getting away, and I believe he

fense, and I have assisted them as best I could. Robert had never sent for me, or made a single suggestion about his defense or any part of it.

"CROSS-EXAMINED BY MR. ALLEN.

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"I think Robert was generally quiet and amiable; he may have had 'fusses' with boys at school, but I do not remember his ever getting into any trouble. During last summer he had a great many schemes started as to what he would do.

"Orville O. Sexton, called and examined by Mr. Davis, says:

"I have been acquainted with defendant pretty much ever since he was born; he has been rather reserved in his habits; have been intimately acquainted with Robert; I have seen him during last summer retiring from society to the woods by himself; when I have seen him he has been sitting by himself; he would go and sit alone

for three or four hours; sometimes he had a book with him; I never approached him as he sat; have seen him sitting in this way perhaps a dozen times, perhaps more; he would sit on a log, or by a tree; would be breaking sticks and whistling.

"I have seen two articles published about the Sloo family. Had a conversation with Robert about these some days after they appeared. He stated in reference to the one signed 'Truth,' that so far as the men were concerned he did not care so much, but he thought it was an attempt to slander his mother and sister, and sink them into infamy; he spoke of them as imputing misconduct on the part of his mother and sisters. He read the language over and over several times to me, in reference to its force as to the chastity and integrity of his mother and sister as virtuous women. He said he thought John E. Hall wrote them.

"CROSS-EXAMINED BY MR. ALLEN.

"Have been intimate with defendant all his life. He was always somewhat reserved; that is, he was probably more studious than most other boys. Sometimes when I saw him in the woods he would be reading, and sometimes not.

"Stephen R. Rowan called and examined by Mr. Davis:

"I have known defendant since he was a sucking baby. I have lived in this town thirty-five years, and have known him all the time, except when he was at school or absent from home. For the past year or two I have lived very close to his father, there being but an alley of about forty feet between us. I was not a great deal with defendant during the summer of 1856; he kept rather to himself, and was not much in my family. I have heard him complain of pains in the head. He would come over to my well, sometimes, after midnight, and draw fresh water and put it over his head. I asked him why he was not asleep, and his reply was, 'Mr. Rowan, I can't sleep, except a little before day.' He did not say what was the trouble with him. I have seen his little sister pour water on his head in the morning.

"Where I heard of the homicide was down in town, within sixty or eighty yards of the place, shaving; when I was about through, I heard a man hallooing for a doctor; I stepped to the door and asked 'What do you want with a doctor?' The man remarked, 'Bob Sloo has killed Hall.' I ran hard down there. I heard no gun. I went into the office, and found the man was killed sure enough. I returned up home, and concluded and told my wife I would assist in removing the corpse to his residence. On my way down I met Sloo and Mr. Freeman coming leisurely along towards my house and his father's residence. As I passed, I said, 'Bob, in the name of God how did this happen?' He remarked, 'I walked into the office and shot him.' Some person—I don't know who it was, several were there—said that he had better be getting away, and I believe he

replied, 'I have nothing to flee my country for.' I walked on, and when I got near down I met the Sheriff. At this time Robert was going into his father's alley. The Sheriff rapped me on the shoulder, and told me to help take him. I said, from the way he was walking, I did not think he would be hard to take. We went on, until several persons collected, and then we returned. Mr. Sloo had then come up. The Sheriff asked him if he could examine in his house, and he said, 'Certainly.' Mr. Davenport then went into his house, and found that he was not there. The Sheriff then asked if he could examine in my house; I said 'Certainly,' remarking that there were no secret recesses that he could run into. We started and got on the door-step, and as I did so I saw Robert Sloo coming. I remarked to him that the Sheriff wished to speak to him; he then got up, spoke to the Sheriff, shook hands with him, and walked right down with him.

"CROSS-EXAMINED BY MR. ALLEN.

"In his habits he differed from other boys. I have been but little acquainted with him until within a year or two, since he was a boy; and judging as to those times, he was more reserved of late. I have seen him bathing his head by my well three or four times at night, and one time after midnight. Have seen him sitting on logs under shade trees four or five times perhaps; on one occasion, I recollect had a book or paper; he was not reading, but the book or paper was lying by him. He sat usually in secluded spots, away above town, and sometimes on the river bank.

"I could not say how often I have heard him complain of pain in his head, and could not give an opinion; but it has been on several occasions, it may be three or four.

"Julia Sloo, called and examined, says:

"I am sister of defendant's; he has for the past year or two suffered a great deal from pain in the back part of his head; we usually poured cold water upon it; this we did frequently during the night as well as by day. His general health was not good; he complained a great deal. He used to have very hard chills, and then his muscles twisted very much. After these fits he would be confined sometimes longer and sometimes a shorter time than at others, sometimes a week and perhaps longer. I think he had some eight or nine chills since 1854; he may have had twelve or thirteen attacks. Dr. Herod attended and prescribed for him.

"Cross-examined.—Dr. Colvard was occasionally called in, but Dr. Herod usually prescribed for Robert. He took a good deal of medicine. Left home in the latter part of 1854. I think he had some very severe chills before that. I think he got home again in May, and I think in the latter part of the summer or early in the fall after he returned he had a chill, the first after he got back. Can-

not recollect the precise number of attacks. Dr. Herod was most always present then."

Virginia Sloo, called and examined, says :

"I am sister to defendant. Do not remember exactly the time he returned from Europe. Don't think he has been sick since ; he has complained of pains in his head, and I have poured water on it two or three times a day to relieve him ; have often heard him going to the well to procure water at night for this purpose. When I say he has not been sick since his return from Europe, I mean not seriously ill."

The newspaper articles, reflecting upon Col. Sloo and his family, having been identified and admitted as evidence, we make such extracts from them as will show their general tenor, and their particular bearing upon the alleged insane delusion of Sloo.

FROM "VINEX."

"I will first take up in review the ringleader of this delectable gang, Col. James C. Sloo, than whom a more malignant-hearted, underhanded, skulking, *dishonest*, traitorous, lying scoundrel, does not encumber God's footstool ; the man who, with deep enmity rankling in his heart, appeared before Justice Bartley, and made *solemn* affidavit that Judge Marshall, our present able and worthy representative in Congress, had advocated Nixon's Nigger Bill—a base fabrication, known to be such, but yet *sworn* to by the Colonel with a view to the vital injury of the Judge in the canvass. In this *laudable* object he utterly failed. Col. Sloo was not believed on oath in his own county, and Judge Marshall at a Convention held in Gallatin County, at Crawford's camp-sheds, met his calumniator face to face, proved to the satisfaction of every one present that Col. S.'s affidavit was false, and branded him publicly as a foresworn villain.

Col. Sloo has broken pledges the most solemn, betrayed the confidence of his friends, robbed the orphan of its inheritance, swindled his neighbors and friends, from whom he borrowed and begged until he could do so no longer, when he turned and like a viper *stung* the bosoms that warmed him ; he has lived out of the public crib for years, and when Gen. Taylor turned him out of office for his incompetency and bad management, he turned political traitor, and now abuses the men and measures of the party that fostered him, without stint, through his tools, Edwards & Son. He has swindled his own county, as I am informed, out of the round sum of fifteen thousand dollars, and now has the consummate audacity to ask the people of that county to elect him Circuit Clerk, so that he may have the handling of his own indebtedness, secured in a trifling bond of two thousand dollars ; but his previous history would indicate this to be

a dangerous experiment, one that the citizens of Gallatin county are not willing to try, and they will give Col. Sloo on the 4th of November next such a rebuke as will forever teach him that his services are not needed in that capacity; they will administer to him a rebuff almost as withering as that which he received in his last race with Jack Kuykendall for State Senate, in which he was so shamefully distanced.

"But I have already taken up more time with this ringleader of the Shawnee sore-heads than he is perhaps worthy of, and have given you but a few of his *amiable* traits of character; at some other time I may be more explicit. I have stated nothing but *facts*, for proof of which I would refer your readers to the citizens of Gallatin county, a majority of whom are cognizant of the same. * * * He deserves to be immortalized in verse by R. C. Sloo, Esq., the youthful poet editor, who patches up and strings together the motley contributions of the combined clique who do up the dirty stuff for the said *Illinoisan*. This youthful prodigy is said to be a traveled gentleman, and has lately returned from a European tour, etc. If we can credit Madame Rumor, this youth of the raven locks, whilst homeward bound, turned desperately valorous at Charleston, S. C., joined a company bound for Kansas, was transported to Cairo, but on his arrival there soon discovered that he didn't like the smell of gunpowder, and having seen a little of the 'Elephant' with the appearance of which he was anything but delighted, concluded that discretion was the better part of valor, and thereupon *courageously* 'turned tail' and ran home. This *desertion* was kept a profound secret by the youth in question, but has accidentally leaked out and is now going the rounds as common property, and as such I give it."

FROM "TRUTH."

"For the truth of the foregoing statements, any voter can refer to the records of Gallatin and Hardin counties as to Col. Sloo's liabilities, and he can also refer to Joseph Smith, Esq., of New Market, for the evidence of his treatment of poor old man Irwin who now rests in his grave, and whose orphan children are turned penniless upon the world, while the Colonel's family nestle in their satins, and fill a large space in the butterfly circles."

Dr. Herod not being an expert, nor claiming to be an expert, in insanity, nor even in the disease of *spermatorrhæa*, the counsel for the accused produced other witnesses, who were experts, or partial experts, not only in insanity generally, but in the particular disease with which the defendant was afflicted. The principal witness, as an expert in insanity, was Dr. McFarland, Superintendent of the Illi-

nois State Lunatic Hospital. An abstract of his testimony, pretty fully given, is necessary for the proper understanding of the case.

"I reside at Jacksonville, in this State; have lived there something more than 3 years; am Superintendent of the Illinois State Hospital for the Insane; have been treating insane people professionally about twelve years. By appointment, in 1845, I was Superintendent of the N. Hampshire State Hospital, located at Concord; prior to that, I practised as a physician for about seven years in the State of New Hampshire; was at the head of the institution at Concord between seven and eight years; then I was a few months in the general practice of medicine, making the cure of the insane my specialty. From my leaving the hospital at Concord until I came to Illinois was about 18 months, part of which time I was at Concord, and part of the time at Lawrence, Mass. The institution at Concord averaged 120 patients, some of them being perpetual residents, and some being admitted and discharged after a short residence. At Jacksonville we average about 250 patients—from 245 to 250; at the present time there are probably 248 or 250. I have visited the hospitals of Europe—made a pretty extensive tour in 1850, visiting the principal hospitals of England, Scotland, France and Italy; have, on a rough estimate, noticed between five and six thousand insane persons.

"I have had occasion to treat insanity originating from spermatorrhœa, and diseases of the genital organs. I think the opinions of medical men differ somewhat as to it as a producing cause; some make out a very large proportion, and some less. I have endeavored in giving statements in this respect to report only those cases that I considered clearly produced by the cause itself. My conclusion has been that somewhere about from ten to twelve or thirteen per cent. of male subjects—that is, confining my statement to this country; foreign observation would be decidedly different. I consider that a disease like this affects the brain in two ways; first, by exhausting it as a physical organ, in the same way as the lungs or stomach or any other physical organ would be impaired by simple depletion. I consider that the brain suffers more from that cause than any other.

"Standard authors on the subject of spermatorrhœa enumerate among its causes the practice of masturbation, self-pollution, or onanism; and then I think foreign authors, more particularly than American writers, enumerate syphilitic diseases—gonorrhœa, injury of the sexual organs, and perhaps other causes which I do not remember. I am inclined to think there is no cause, unless it be general ill health, which produces an equal amount of insanity. I make that statement with some hesitation; I don't know that I have thought of it. The result of masturbation depends upon the constitution of the diseased person. There are some men who practice the vice

with impunity through an entire life; in others, however, the effect is decided, and ends only in insanity. The general rule is that it impairs and finally destroys the powers of the mind, and breaks down the physical system—the latter not to so great an extent as the former. Dementia is perhaps the consequence, with large exceptions. The symptoms of seminal loss in a majority of cases would be a change in the habits and moral manifestations of the person, attended by jealous suspicions, ungrounded aversions, shyness, a disposition to avoid the society of his friends, a propensity to habits of seclusion and retirement, changeableness of purpose, a disposition to take up with new schemes and projects, and adopt new ideas and relinquish them as easily.

"I have heard all the testimony in this case; the existence of spermatorrhœa seems to be firmly established in my mind. The first thing that strikes me in the testimony is that of Dr. Herod; he states that accused was in the habit of coming to him somewhat frequently, as if he had a strong impression upon his mind that he had a disease upon him that demanded the attention of a physician. Dr. Herod says that the accused stated to him his symptoms, and assured him he had the disease. Dr. H. I think also stated that he had ocular demonstration of it by seeing the evidences of it. It seems to me that the same kind of testimony is given by Col. Sloo himself; he seems also to have had the same kind of demonstration. This disease seems very clearly proved to my mind, and that it existed to a degree prior to his leaving for Europe, and that it could not be considerably protracted without seriously impairing his mind. The next thing is how he goes away, and his course while away; his friends here only hearing from him in fragments—indicating a want of that disposition that a young man in a healthy state of mind would naturally exhibit to communicate with his friends; his joining Col. Buford and his return; then he shuns his friends when he meets them.

"A person laboring under this disease is at times talkative and communicative. Variability in the power and capacity of the mind would be a proof of the existence of the disease. I do not think that the carrying on of intelligent conversation would militate against proof. Pain in the head, as described, sometimes accompanies it, but I think it does not stand as a constant symptom; pains in the back are more usual; constipation of the bowels is a constant symptom. There is nothing in the twitching about the thigh as a peculiar characteristic of the disease; it merely proves the general disturbance of the brain; the spasmodic action does not necessarily follow. My view of these convulsions in this case has been somewhat different from those who described them, but I do not know that I should put my opinion forward before those who watched them, or who were in the habit of treating convulsive chills. I have been in the habit of seeing, in cases of insanity from seminal emissions, a

peculiar form of convulsive disease which is well described by Dr. Herod. It seizes upon the patient sometimes when the seminal emission has not been for a little while apparent, and I have accounted for it under the impression that the retained semen acted as an irritant. Dr. Herod gave a very good description of cases of the kind. I should call it convulsive irritation.

"I think acts of homicide frequently grow out of insanity produced from this cause, it being peculiarly apt to generate that kind of delusion out of which homicidal acts naturally grow. I can give no particular cause for this but the suspicious, jealous character which the symptoms always assume, forming themselves into delusions out of which these acts result. The delusion out of which the homicidal act would grow would bear no strict proportion to the provocation offered. There might be a provocation either great or trivial. Insane people will act on provocation much the same as sane people. I have known of such instances. Insane men differ by running into extremes. I recollect a case of this kind in Henry county of a man by the name of Bryant. I think they have the same desire to retaliate for injuries as other people, with this exception, that they are more impulsive; the disposition is to avenge the injury at once, and, if not at once, it passes out of mind simply from inability long to indulge the desire. I consider the local cause of insanity to be disease of the brain.

"Should the insane man, from want of power of the mind to retain impressions, forget the idea of vengeance, the desire might return upon again seeing the object of the desire. I can call to mind, I think, three cases where homicide has clearly grown out of a delusion, or of a resolution evidently entertained to commit it. I think in one instance the act of homicide was committed some two or three months after the provocation that gave rise to it. I think in the other two cases, where the homicide was the direct result, the act instantly followed. Violence of temper and wildness of manner are accidental traits that may or may not be present in insanity. In very marked cases of insanity these outward demonstrations are often very feeble; the reverse is also true. My opinion as to the proportion of these would be taken from observations made in Insane Asylums. Of 250 patients in a hospital, not more than one-fifth would show their disease; the others would be natural in their appearance and demeanor; two-thirds would probably strike the observer as well-dressed people. I consider the eye as quite a fallible test. Long continued insanity has the effect to exhaust the bodily powers; hence it follows that on observing a large number of insane people, it would strike one that there was insanity among them. Of 250 patients, half would appear to be in ill-health; that perhaps would follow in a great measure from the absence of exposure to the sun. I suppose these answers to be mere approximations to the statistics, but I think them near the general rule.

"I have examined the defendant, and that examination would go to corroborate the impression I have got of his history prior to the homicide; his being more fleshy than he was, is not incompatible with the idea of insanity.

"The symptoms proved in this case do not as a class occur in any other disease that I know of, and experience would teach that they would end in insanity. Insanity is of so variable a nature that few cases are alike; there are some forms where the progressive stages are well masked; at other times it is sudden in its approach.

"I consider that defendant was insane when he killed Hall. A delusion is a belief in any thing, circumstance, or transaction, whose actual existence would be in violation of experience and reason. I consider that to be the definition of a positive or entire delusion; a large class of delusions that are entertained by the insane are partial. A partial delusion is where the reasoning is not altogether erroneous, but may have a basis in fact, and which derives its importance from the diseased pertinacity with which it adheres to the mind of the party entertaining it. A very common form of partial delusion is this: A person whose physical health may not be perfectly good (I cite this instance because it is so common) attends religious meetings where the theological doctrine is enforced of his inherent natural wickedness. He conceives the idea that he is a great sinner, which may be considered in the minds of a large theological sect to be a fact, yet in his mind it assumes the form of a delusion because out of it grows, by a diseased process, the further extreme of belief, which is a palpable delusion—that is, that he is not only a sinner, but that he is an unpardonable sinner; and not only that, but that by his sins he has converted himself into a demon or evil spirit. In the first instance the delusion was but partial, but it passes into an absolute or entire delusion. I think the majority of the delusions of insanity are latent. Judging from the state of the accused's mind at the time of the publication of the articles, I should think that the impression that would take possession of his mind might justly be entitled a delusion. I should think the act which followed was not inconsistent, in his state of mind, with the impression which he got from the articles.

"At the time of the homicide, judging from the evidences rendered, defendant was in a state of insanity.

"*Cross-examined.*—It is made compulsory on me to attend trials of this nature by the 16th section of the act of 1851. I was summoned here under the act by a special subpoena. I have stated that the act might be consequent upon delusion, and that perhaps the impression which he entertained might bear the construction of a delusion: my meaning would be that his diseased perception might have given to the published articles a construction which their writer might not have intended to convey: the legitimate inference

might be that they did convey a false idea of their import, and that false conception might be construed as a delusion. I drew the inference from the testimony that he gave to them a stress which the import would not warrant or sanction; my mind does not suggest that other witnesses gave a like construction to the articles. The testimony to my mind indicates incipient dementia, by which I mean that condition of mental disease which is the precursor of dementia. This is a distinct form of insanity; under this form I should think there were times when the patient collects ideas but imperfectly; it does not amount to entire loss of memory, but is a suspension of the faculty. This disease is governed by the same pathological laws as other diseases. I should think the domestic attachments were weakened; the social attachments are broken up, and the individual affected becomes estranged from his friends; regardless of his parental obligations generally. I should think the ties between brother and sister would not be broken up, but they would be impaired somewhat—the more so in its advanced stages. Just after the seminal emissions these faculties would be weakened, and when the patient is in a state preceding the seminal emissions, then there is the exercise of the powers of the imagination, and more or less of the memory.

“The manifestations of incipient dementia are well illustrated by the case before us. It is the gradual undermining of the general powers of the mind, the powers not suffering all in the same degree; some retain their activity after others have been decidedly weakened. I should think the faculty of correct reasoning and judging of the relation of things would be first affected. A man can not be sane when one faculty of the mind is impaired, but he may retain the power of reasoning correctly, and know the right from the wrong. In this case it has been so progressive in its stages from the time of the first attack that it is difficult to say when the case began; it seems to be clearly established on his return from abroad. I think the great fact in regard to the disease would impress itself upon the mind of an experienced practitioner. I deem his walking by himself in solitude as an important step in the case, as taken in connection with the rest of the evidence, but think my conclusion would be the same if that isolated link in the evidence was wanting; but if I understood that the uniform feature of his character was to mingle with his friends, my opinion might be shaken. I could hardly conceive of a pursuit so extreme which would produce a degree of engrossment that would demand this kind of seclusion. I have known individuals who have habitually retired from society and who have been sane, but there have not been the accompanying and collateral proofs which go with the case hand in hand. It is not one feature that makes up a case of sanity or insanity. Insanity in this form is the natural result of spermatorrhœa upon certain constitutions, but there are constitutions which brave the danger successfully.

"In this case the act of killing bears the general features of the act of insanity. I can not conceive of a sane man doing the act in the same way. I think it makes but little difference upon whom the delusion of the insane man is inflicted; it may be upon an enemy or a friend; perhaps as likely one as the other. The insane man will act on either according to the provocation, supposed or real. If the evidence shows that defendant had been drinking to excess, or so as to show its effect upon him, I suppose that might give a different coloring to the act itself. In the last stages of drunkenness and spermatorrhœa there are certain points of resemblance, but I should think the character of acts resulting from each would be different. In incipient dementia the health might be tolerably good; perhaps the patient's rest would be disturbed. I would not be surprised at the absence of sleeplessness, but I should rather look for it and expect to find it. I should have no doubt that, in such a case as this, outbreaks, impetuosity, and perhaps quarrels, would be likely. I should be surprised to find a strong habit of sleep and the absence of the last named points, but should not consider them vitally important in making up a case where other symptoms were present. I should consider the desire to be alone as of more importance, but a case might exist where all these were absent. His being sometimes in the company of ladies does not militate against the idea of insanity. I should suppose that these symptoms wanting, would be leaving out such things as I should naturally look for.

"I do not consider sleeplessness absolutely necessary, nor irritability. I suppose partial estrangement from friends would be a symptom. I should think insane persons more difficult to be impressed by medicine than persons who are sane, but do not attach much importance to that in this stage of dementia.

"I made some general examination of defendant at the jail. I discovered no evidence which I could make plain to the jury, but there was carried to my mind a disposition to view subjects in a way which I conceived gave a diseased aspect to his mind. I could not have decided in the case without evidence. The examinations were hardly worthy the name. If my attention was not directed to the fact of insanity, I should not have decided upon its presence. My visits were for another purpose—to satisfy myself by ocular demonstration of a certain thing that could be ascertained by an examination of his person. I formed no conclusion as to insanity from that examination.

"I was first spoken to in June about this case, by Colonel Sloo. I can not be positive as to the cause of spermatorrhœa in this case.

"*Re-examined.*—An insane man will frequently do an act he knows to be wrong, but which he will justify in his own case.

"*Re-cross-examined.*—So will a sane man; at least I can conceive such a case.

"*Re-examined.*—I merely inspected the person of defendant ; it was to ascertain, if possible, the cause of the spermatorrhœa.

"*Re-cross-examined.*—I consider the views of Ray pretty correct.

"Dr. Roe called, sworn and examined, says :

"I reside at Bloomington, in this state ; have practiced medicine in this county about nine years, and am second cousin to defendant ; have practiced medicine 22 or 23 years ; was in this town in 1841, and remained till the spring of 1850. Insanity was my favorite branch of study ; I studied with a view to have charge of the Insane Asylum. Was intimate with defendant ; boarded in his family. Defendant was a very good boy ; he was rather remarkable as a peaceable boy. Have heard all the evidence in this case ; have no doubt that he labored under a delusion at the time of the homicidal act, which conclusion I arrive at from the nature of his disease, the evidence I have heard, and the examination I have made. I think the existence of spermatorrhœa is clearly proved, as also its increase, as well as its efficiency in destroying all fixedness of purpose.

"I think that insane men have always real or fancied provocation which leads to their acts of violence ; they frequently attack their friends. I think he had been insane for months before the homicide, and that, being so, the effect of those articles would be to create a morbid excitement. I think the symptoms proven here do not come, in a body, attendant upon any other cause. I see nothing in the description of his convulsive fits to show that they were convulsive chills. I think spasms do not attend the latter. I think the cramping of the fingers is not usual during life in chills ; I think these were consequent upon spermatorrhœa, one of the effects of that disease being to expend the energies of the nervous system, and derange the nervous system that is left. Have treated as many as 20 or 30 cases of spermatorrhœa, and I think more. It may be produced by sexual abuse, irritation of the rectum, and some local diseases ; also venereal diseases. I have known some cases as the results of gonorrhœa. I think it was produced in this instance from the manner of his education, his temperament, want of exercise, and accompanying causes of that class, probably aided by gonorrhœa.

"I made such examinations of defendant in jail as could be made without stripping him. I believe I should have known that he had the disease from simply seeing him and shaking hands with him. The evidences of the fact are his physical person, the peculiar filling out of the cellular substance under the side of the cheek, the expression of the eye, want of healthy appearance of the face, and other things I may not be able to sum up. His pulse has a peculiar beat ; it lacks force and vigor—has a lymphatic stroke. My opinions are confirmed by my view of defendant.

"*Being cross-examined, says :*

"I came to this state from Indiana, and formerly from Ohio. I

should say the faculty of judging of the relation of things was impaired in defendant; also the faculty of memory. These faculties may be destroyed and the healthy physical condition remain; the party may be insane to that extent. His case comes under the term dementia. I have no doubt the impairment was caused by spermatorrhœa, or the involuntary discharge of semen. I think that at the time of this act defendant was laboring under dementia. I think he was laboring under unjust views of facts as to all the circumstances in the case. It is difficult to determine the question of sanity by a single instance; the history of the party must be developed. Passion is not an evidence of insanity as taken alone, but the acts of sane and insane men are so frequently alike that it is impossible almost to distinguish between them unless by previous history of the party. I think in this case defendant might at times reason correctly; he was in a variable state; these changes are generally accompanied by external indications as to the cause; I doubt if there is any infallible test of insanity. There are indications, to be sure, by which we determine upon the form of insanity; if a patient could cypher to the rule of three was once the test; but I have seen a good many insane men that could do that better than I can. Incoherent speech is a symptom; but it frequently occurs that an insane man will express himself with precision. I think his habits as proved help the decision. I am not able to state the particular facts upon which I base an opinion; I take the whole evidence together. I think in dementia the moral feelings become impaired, perhaps as a necessary consequence, because it affects the brain, which is the seat of the social feelings. I think that is shown in this case. I think the articles published morbidly excited the brain to the perversion of his judgment; have no doubt he was laboring under dementia prior to the publication of the articles in question, and evidently they influenced this act.

"A person laboring under dementia might be unable to retain memory as to an insult, but in my opinion the sight of the party giving it would revive the desire of vengeance. The faculties of memory may return for a time without the power of reasoning. I think there is danger of confounding eccentricities with insanity. I have heard of several cases of spermatorrhœa in Bloomington; treated four or five cases in Shawneetown, and twelve or fifteen before I came here; parties do not always go to a physician. I think this disease is more frequent in this country than in France; have seen acts of defendant that would make me suspect something was wrong, but I think from my examination I could not decide as to his insanity.

"*Re-examined.*—The peculiarities in this case arise from disease and not organization; a man must be compared with himself in deciding as to his mental unsoundness; no set of descriptions can be laid down. I think an insane man would act upon apparent provo-

education as a sane man might. By partial dementia I mean the partial destruction of the mind, and by incipient dementia I understand the initiatory form of the disease; in complete dementia the person afflicted generally avoids his friends: he is liable to sudden uncontrollable impulses, to outbreaks of passion.

"Dr. Henry T. Spencer called, sworn and examined, says:

"I am a physician since June, 1850; graduated at the Albany Medical College in New York; began practising in Chili, South America; remained there twenty months, then practised until eighteen months ago at Lebanon; now reside at Bloomington, in this State; have had a somewhat limited experience in the treatment of the insane; for two years I had charge of the Albany county hospital, averaging from thirty to thirty-six insane patients; have heard all the testimony in this case, except a very little of Mr. Olney's; I think, if it is true, that defendant was laboring under a diseased mind, springing from spermatorrhœa. Have treated four such cases. Some temperaments are more easily affected than others; such a temperament as defendant's for instance is more susceptible. In cases of spermatorrhœa, we find the patient complaining of dyspeptic symptoms attended with pains; we sometimes find tingling signs about the orifice of the rectum, weakness of the lower limbs and a sensation of coldness passing from the feet over the body; we meet changeableness in the character of the individual; at times he is melancholy, and at other times joyous, takes aversion to persons with whom he is intimate, has ungrounded apprehensions, and these go on and result in dementia; in defendant I think this amounts to insanity, to wit, incipient dementia. Dementia differs from idiocy; indeed idiocy is a congenital lesion of the brain, or the brain never was developed, while dementia is the result of prolonged debility; when complete there is no sense at all. Incipient dementia is its early stage. In this state the patient would be liable to irresistible impulses. Insane persons frequently attend to the ordinary duties of life and appear to be physically well. Physiologists locate this disease in the brain. There are no set of symptoms always accompanying the disease. A delusion may have some foundation, it being carried to a diseased extent. Had two interviews with defendant to ascertain the cause of the original disease. When a person is insane I believe homicidal acts that grow out of the insanity are based upon delusions, although it may be impossible for the sane mind to trace it. I know of such a case as a known insane man acting upon provocation. I don't think the fact that defendant has gained in flesh militates against the idea of insanity. Have taken defendant's pulse; it was too rapid; it was 100 to 110; it should be 60 to 75; he was sitting in jail with nothing to excite him when I counted. Have noticed the subject of feigned insanity; mania is the form generally assumed. Have known of an act of violence in insanity following

spermatorrhœa : it was suicide : a young man had been laboring under the disease for some time and committed suicide in my presence. This cause produces a variable stage of insanity ; it does not run a uniform course, but is changeable in its character.

" *Cross-examined.*—I think the existence of spermatorrhœa is plainly shown by the evidence, basing this opinion upon the statement of Dr. Herod chiefly, and the information he obtained from the defendant, and the examinations of his clothing made by the father of accused.

* * * * * "The symptoms given are those of incipient dementia following spermatorrhœa. I do not know that they are symptoms of any other disease. Persons may have a single symptom or a few of the symptoms and not have this disease, but it is the union of the symptoms upon which the conclusion is based.

"I have in my mind a case where I treated for spermatorrhœa, and the patient retained his flesh. There is a difference in the strength of the muscles but not in the external appearance of the person, the effect being more particularly as upon the mind ; it also produces great debility and want of muscular tone and weakness of the extremities, and an inability at times to move about. In an advanced stage it can be detected by ocular demonstration, but I do not take that as an infallible proof ; in this I can not answer for others, but I can not detect it by a *look*, though some others there may be who can. I might suspect its existence because of peculiarity about the eye, there being frequently a leaden hue under the eye, with a redness of the lid and a peculiar fullness about the neck ; the flesh becomes flabby ; there is a want of freshness of color, and sometimes a weakness about the knees ; this is frequently accompanied by a meandering in the walk.

"I conclude that the defendant was insane at the time of the commission of this act. Lunacy is simply a generic term, embracing different forms of insanity. This man, I think, labored under incipient dementia, which is the formative stage of dementia ; his mind not being destroyed but impaired, so that he can not correctly judge of the relations of things. I have no doubt but that a person laboring under incipient dementia can distinguish between right and wrong, but not be conscious of that difference as to his own case. He may think and act right in him which he would know to be wrong in another ; he does not conceive of the wrong of his own case. Dementia is merely a form of insanity.

"I don't think defendant at the time of the commission of this act had judgment. I think he labored under that form of insanity where he might be constrained by an influence which he could not resist. If he had any judgment I think it was not carried into exercise. I

think at that time he had no reason as to the act he was about to commit. I judge this by the result of the disease under which he labored. If he had judgment I do not think that was called into exercise, although it is possible that it was so.

"A man can have a delusion and be sane on other subjects, because insanity may be partial or general. In this case I think that there was a general impairment of the mind; I think that a perverted reason might have swayed him; I would not say that he had no reason, because reason had no sway over the particular act, because I doubt of the ability to judge of the workings of the unsound mind; I suppose they can reason, but not correctly. By a perverted judgment I mean more than a bad judgment. I mean a judgment misguided by disease of the mind; I suppose that judgment is the result of reason. I do not think he was generally insane. I am a sceptic on the subject of phrenology.

"(Witness here explains the formation, &c., of the brain.)

"I think the mind was partially diseased; could not say that it was generally diseased; his moral faculties were evidently perverted; can not locate the parts affected by such perversion. Where the mind is completely destroyed I think there can be no delusion; a delusion can exist in reference to judgment. I think that Sloo had a delusion; can not say positively what it was based upon, but the published articles had the effect to excite him. He must have misconstrued the articles, and the delusion resulted. I think however, that a man may believe in the existence of a thing and yet not labor under a delusion; but I think he may be convinced that he is wrong. But this is different in the case of one who is insane.

"I think there can not, in a medical sense, be a delusion unless it accompanies an impairment of the mind, of which the delusion is, to a certain extent, evidence. I suppose that the brain is the primary seat of insanity; I think Ray, Neville and Cox bear me out in this opinion. I could not give an opinion safely as to defendant's condition, based upon conversation with him."

The prosecution here called *ninety-seven* witnesses, more or less acquainted with Sloo, to give evidence as to his conduct and character. Of course it is impossible, within our limits, to analyze such a mass of testimony. The first witness seems to have busied himself, by his own acknowledgment, rather forwardly, in procuring evidence to convict Sloo—"hunting up witnesses," as he expresses it. We give a specimen of his testimony:—

"Never examined him with reference to the state of his mind. Have no knowledge of physics. I know something about brains,

but as to the human brain, I don't know any thing about it; I know about hogs' brains; hogs go by instinct. I have had some study about the ability of hogs to reason, and have been inclined to think that some hogs can reason. It is my impression that instinct is not reason. I have never had any scientific reading; never read any thing about the structure or organs of the human intellect. I merely judge of sanity by my observation of the man, by observing his countenance and his eyes. I look at him and talk with him, and then from this operation I form my opinion. I can not form any opinion as to defendant's conduct on the day of the homicide; I judge of him since; made no examination of him since, other than looking at him. He was brought for examination before myself and Esq. Bowman; he did not speak then, unless it was once to Mr. Bowman; think I saw them whispering together. I practice law for a living. I make suggestions in this case, and hunt up witnesses. I was spoken to by Capt. Lawler, and if I get any pay for it it will be gratuitous and under no contract at all. I have not formed any opinion of his sanity that is entitled to weight; don't think I am acquainted with his habits; think it possible to form a pretty correct opinion as to sanity without a knowledge of particular habits; make up an opinion after seeing a man a few times. It is more properly an impression than an opinion. In my opinion, the brain is the seat of intellect in man; some men's brains may be in their stomachs. Understand the mind to be that by which we reason, think, and control our will or actions. I mean by a sane mind one in sound health, where the mind is unimpaired. Don't know whether the brain is a physical organ or not."

It would be, obviously, unfair to judge of all the lay testimony by such an example as this, although it be the testimony of a man who professes to be a lawyer, and therefore a little higher educated, presumptively, than many of the lay witnesses. A man, whether lawyer or not, who thinks that some *hogs* can reason, might very well think that an insane *man* might be capable, not only of reasoning, but of displaying all the powers of the human mind to an indefinite extent.

At this point, a question was strenuously debated by counsel respecting the admissibility of the testimony of the crowd of lay witnesses summoned to rebut the evidence of experts produced by the defense, and more generally as to the legal admissibility of any evidence on the part of the prosecution by way of rebutting the defendant's testimony after it was closed.

The latter point, being a purely legal one, applicable to all criminal prosecutions, is not within our province to argue. We are disposed to concur, however, with the opinion of the court, allowing it to be admissible. With respect to the other point, it being a question concerning the weight of the testimony of *experts*, we may be permitted to say, that if *expertness* is of any value as evidence, it ought not to be rebutted or gainsayed by the testimony of any cloud of witnesses, who are entirely inexpert. Such witnesses may give testimony as to conduct, actions, facts, and changes of deportment which they are competent to observe, and upon which experts may deduce a judgment or opinion; such, for instance, as Dr. McFarland's in this case, which is strictly a deduction from testimony given in his hearing, and from casual examinations of the accused, which alone, however, were insufficient to justify his strongly expressed convictions of his insanity.

There is little or nothing in all the testimony extracted from these inexpert witnesses that impairs the force of the evidence given by Dr. Herod, Col. Sloo, and his daughters, Dr. McFarland, and Drs. Roe and Spencer. The testimony of Dr. Condon, for the prosecution, is of no legal account, because he was not in any sense an expert. He had never treated, in all his experience of twenty-five years as a physician, more than one case of insanity, and all that he knew of a case like the defendant's was derived from books. Clearly his testimony could be of no more value than that of any intelligent non-expert, who was of commonly acute observation, and intimate with the accused. In such cases, the testimony of an observing and intelligent friend or intimate, is worth more than that of a non-expert medical man who depends upon the testimony of other people, and has no opportunity of direct observation.

We have not space, nor is it necessary for our purpose, to take particular notice of the appeals to the jury and arguments to the court of the counsel for the state or for the defense, either as respects the legal points raised, or the testimony produced. They occupied the time of the court and jury four days, with various force of argument and learning, respecting which we do not choose to discriminate.

The charge of the judge is so clear, and considering the length of the trial and the mass of testimony adduced, so succinct, as well as so considerate and well digested in respect to the law relating to insanity as generally regarded by the courts, that we think it worthy of a full abstract.

THE CHARGE.

"The court instructs the jury in the matters of law applicable to this case, as follows:

"Murder is the unlawful killing of a human being in the peace of the people, with malice aforethought. The malice may be either express, which is that deliberate intention unlawfully to take away the life of a fellow-creature, which is manifested by external circumstances capable of proof; or it may be implied, as for instance where no considerable provocation appears, or where the circumstances of the killing show an abandoned and malignant heart.

"Slandorous words, whether spoken, written or published in newspapers, do not, in law, amount to a considerable provocation, either to justify or excuse the act of homicide. If you believe, from the evidence in this case, that defendant unlawfully killed the deceased with malice aforethought, either express or implied, your verdict should be guilty. Whether the homicide in this case amounts to murder or not, depends upon the farther question, whether or not there was a union or joint operation of act and intention in its commission. The bare act itself, without the intention to commit it, is not sufficient. The intention must be present. In a legal sense, however, the intention at the time of the killing was not present, or did not exist, if at such time the defendant was insane, or of unsound mind.

"Insanity, or unsoundness of mind, is matter of defence. The defendant has relied upon it as such in this case, and the material question for you to determine is, whether or not at the time of the killing the defendant was insane, or of unsound mind.

"This question may be considered in three aspects:

"1st. Was the defendant, at the time of the killing, insane, or of unsound mind?

"2d. What is the rule of law as to the degree of testimony necessary to prove insanity?

"3d. As to the character of such testimony.

"And 1st. Was the defendant, at the time of the killing, insane or of unsound mind?

"In considering this question, it is necessary for you to know that

in criminal cases, in order to absolve the party from guilt, a higher degree of insanity must be shown than would be sufficient to discharge him from the obligation of his contracts. Insanity may be general in its character. By which I mean that state of insanity which would exempt the person from punishment in one case as well as another; in the case of larceny, burglary, and arson, as well as in murder or other crimes. It may also be limited or partial in its character, as where the insanity extends only to one or more subjects, the person being sane upon all other subjects, or in all other respects; in which case, the liability to punishment for crimes not coming within the range or class of offences covered by such limited insanity would be the same as that of a sane man. There being these two kinds of insanity (not saying that there are no other divisions of the subject)—viz., such as are general, and such as are limited or partial in their character—whenever a defence is based upon either kind, or upon both, the questions for the jury to determine are—

“1st. Whether insanity exists at all or not; and if it does exist, then, whether it exists to so high a degree that for the time being it overwhelmed the reason, conscience and judgment, or whether the party accused acted from an uncontrollable and irresistible impulse. If, in either of the before described kinds of insanity, the disease did not exist to such a degree as before stated, but there still remained a sufficient power of memory to recollect the relation of persons and things, and that the act he was committing was contrary to the plain dictates of justice and right, injurious to others, and a violation of the dictates of duty, then the accused would be liable to punishment; otherwise, he would be exempt.

“And, to elucidate the matter still further, I will remark that, when a person is laboring under such insanity as will exempt him from punishment, experience shows that he is still capable of recollecting and reasoning, and often to such an extent as to deceive a casual observer. He is often cunning and shrewd, and capable of devising plans to accomplish his purposes. In all such cases therefore, this capacity of recollecting and reasoning, this cunning and shrewdness, often showing a knowledge of right and wrong, do not militate against the plea of insanity. They are, in fact, common to both the sane and insane mind. Hence, the existence of these mental qualities does not disprove insanity, as the insane man possesses them as well as the sane man. But where the object is to test the degree of insanity, to ascertain whether or not the person is insane, or that his mind is diseased to that extent which exempts him from punishment, it is competent, in such cases, to inquire whether the accused had capacity and reason sufficient at the time of the act to enable him to distinguish between right and wrong as to the particular act itself—whether he had a knowledge and consciousness that the act he was doing was wrong and criminal, and would subject

him to punishment; for, although he may have been insane, or his mind diseased, to a certain extent, if he still understands the nature and character of the act and its consequences, if he had a knowledge that it was wrong and criminal, and a mental power sufficient to apply that knowledge to his own case, and to know that if he did the act he would do wrong, and receive punishment,—such partial insanity, whether it is manifested in cases of a general or a limited character, is not sufficient to exempt the accused from punishment, or responsibility for crime. These principles are to govern you in coming to a determination in this case. Was the defendant, at the time of the killing, laboring under general insanity, such as would exempt him from punishment for all other crimes as well as murder? or was he laboring under that limited insanity which would only exempt him from punishment for crimes resulting from that insanity as its cause? or whether he was laboring under both these kinds of insanity, to such an extent as would exempt him from punishment? As to the first two propositions, viz., whether he was laboring under limited or partial insanity, the rule is, that if in either case he had capacity and reason sufficient to enable him to distinguish between right and wrong as to the killing of the deceased, if he had a knowledge and consciousness that the act was wrong and criminal, and would subject him to punishment, and a mental power sufficient to apply to his case, your verdict should be guilty; but if you are satisfied, from the evidence, that his mind was in a diseased and unsound state, and that such disease existed to so high a degree, that for the time being it overwhelmed his reason, conscience, and judgment, and that in committing the act he acted from an irresistible and uncontrollable impulse, you should find him not guilty. As to the other proposition, viz., whether he was laboring under both general and limited, or partial insanity combined, his guilt or innocence will depend upon the same conditions as are above stated.

“But, in this connection, it becomes your duty to inquire whether, in case his general insanity did not exist at all, or did not exist to such a degree as to exempt him from punishment, then, was he at the time of committing the act laboring under a limited or partial insanity, or, in other words, under an insane delusion that the deceased had been and was still endeavoring to ruin the character of himself and relatives, and to bring about his own destruction, and that the killing of the deceased was the only appropriate remedy to prevent it; if you believe that such a delusion existed to so high a degree that, for the time being, it overwhelmed his reason, conscience, and judgment, and that in committing the act of homicide he acted from an irresistible and uncontrollable impulse, you should find him not guilty. But, on the contrary, if you believe, from the evidence, that the defendant, at the time of the killing, had capacity and reason sufficient to enable him to distinguish between right and wrong

as to the killing of deceased, and had a knowledge and consciousness that the act was wrong and criminal, and would subject him to punishment, you should find him guilty.

"2d. As to what amount of testimony is required to prove insanity.

"Upon this point the court instructs you as follows:—That the principle of law is, that every man is presumed to be sane, and to possess a sufficient degree of reason to be responsible for his crimes, until the contrary is proved to the satisfaction of the jury. And in this case, in order to acquit the defendant, the evidence must satisfy your minds, that at the time of the killing the defendant was laboring under such a defect of reason, from mental disease, as not to know when he killed the deceased, the nature and quality of the act; or, if he did know it, he did not know he was doing wrong. Your minds must be clearly satisfied, from the evidence, of the existence of the defendant's insanity at the time of the killing; and that that insanity existed, as has been before stated, to so high a degree, that for the time being it overwhelmed his reason, conscience, and judgment; and that in committing the homicide he acted from an irresistible and uncontrollable impulse. But as the defendant has introduced evidence to sustain the plea of insanity, and the prosecution has produced evidence to rebut it, the rule of law in such case is, that you must be clearly satisfied of the truth of such insanity at the time of the killing, by a preponderance of testimony in his favor. You are to judge of the credibility of the witnesses on both sides, and to give to their evidence such weight as you think it entitled to. If, upon the whole evidence, there is a preponderance in favor of the defendant's plea of insanity that satisfies your mind that it is true, to the extent and degree required by law, to exempt him from punishment for the killing of the deceased, you should find him not guilty; if otherwise, you should find him guilty.

"3rd. As to the character of the testimony—the testimony of medical witnesses, introduced on the trial of a cause, is competent testimony; and where their experience, honesty, and impartiality are undoubted, such testimony is entitled to great weight and consideration. It is remarked by an able writer upon medical jurisprudence, Mr. Wharton, that 'such testimony is authoritative.' By this expression, it is not intended that the jury are absolutely bound to be governed by the testimony of medical men. If such witnesses are experienced in their profession, are honest and impartial, and are governed by no improper motives, or ruled by no improper influences, their evidence or opinions upon the medical questions submitted to them are entitled to great weight. The object of such testimony is to aid and assist the jury in coming to correct conclusions upon the whole case.

"You should apply these principles to the testimony of the medical men introduced as witnesses in this case, and the weight to be

given by you to their testimony should be in proportion to your confidence and belief in their experience, honesty of purpose, and impartiality, and in view of the whole testimony on both sides. If you are satisfied that the defendant, at the time of the killing, was insane—that said killing was the result of an irresistible and uncontrollable impulse, growing out of a diseased and insane mind, you should find him not guilty; otherwise, your verdict should be guilty.

"The court further instructs you, that if you believe from the evidence that the defendant killed the deceased with malice aforethought, expressed or implied, you should find him guilty.

"But if your minds are clearly satisfied, from the preponderance of evidence, that at the time of such killing he was insane to that extent, previously explained, which exempts him from punishment, you should find him not guilty.

"If you are not satisfied from the evidence that he was so insane at the time of the killing, you should find him guilty.

"And if, upon a view of the whole testimony in the case, you entertain a reasonable doubt of his guilt, as charged in the indictment, you should find him not guilty."

Verdict—Not Guilty.

"On the following day, upon affidavit, Robert C. Sloo was declared by the County Court, Mr. Justice Bowman presiding, to be insane; an order for his transfer to the Insane Asylum was made out, and on the following Monday he was thereunto dispatched."

On a review of the whole testimony, of which we have endeavored to give a fair abstract, we think the proof sufficient to show—

1st, The existence of physical disease of long standing.

2nd, The frequent result of that disease in insanity, or such an impairment of the mental faculties as destroys responsibility.

3rd, Its actual result in insanity,—incipient dementia,—in this particular case.

4th, The probable existence of an insane delusion, which was the immediate cause of the homicide.

The first point seems to be sufficiently proved by the testimony of Dr. Herod, of Sloo's father and sisters, and of some of his acquaintances and intimates out of the family.

The second point is abundantly proved by Dr. McFarland, an acknowledged expert, and by Drs. Roe and Spencer, partial experts, and sufficiently conversant in the practice of medicine, and with the

particular physical disease and its results, to justify a confidence in their opinions.

The same testimony, taken in connection with the circumstances attending the homicide, is satisfactory to our minds, that it was committed by an insane or partly demented man.

As to the existence of an *insane delusion*, in the ordinary sense of the term, we are not quite so clear. The same inference seems to have been drawn from the newspaper articles reflecting upon the Sloo family, by the father of Sloo, as was drawn by Sloo himself, respecting their intent to cast a reproach upon the mother and sisters on a point that is vital to the good repute of women. That a *sane* man, like Col. Sloo, should have inferred such an intent from the mere suggestion (which is all that the articles contain respecting the female part of the family) that they "nestle in their satins and fill a large space in the butterfly circles," is very singular. It is not, perhaps, singular that a man incipiently demented, and excited by the virulence of the attack upon his father, and the ridicule cast upon himself in those articles, should morbidly construe the expression quoted, into a slander upon his mother and sisters, and conclude that a writer who would wrongfully accuse the male members was quite as willing to reproach the female members of the family, and meant to do so under the cover of that allusion. Although we concede that there might have been an *insane delusion* on this point, still it is not the strong point of the case; for we think that conceding incipient dementia, without a particular delusion, and considering the bitterness of the articles in a general way (without reference to what they contain respecting the mother and sisters, and their likely effect upon the impaired mind of a son and brother) the jury had ample reason to acquit on the general ground of insanity, even if no attempt had been made to prove the alleged *insane delusion*.

What we have further to remark upon the case must be briefly stated.

The act of Sloo may, by some, be classed under the head of *impulsive* homicidal insanity. In our judgment, an impulsive homi-

cide is not oftener committed by an insane, than by a sane man, and is usually committed by both upon some instant provocation, either actual or imagined. The procuring of a weapon, a week, or a day, or even an hour before the act is done, implies deliberation; the seizing of an instrument of offense on the instant, whether the provocation be actual or imagined, is characteristic of an impulse. An insane man will often entertain, and then abandon, and then revive a purpose to commit a homicide. We give an instance taken from the minutes of the superintendent of an asylum for lunatics.

G. was afflicted with acute mania. On one occasion his attendant, J., (who was afterwards discharged for the act,) treated him harshly, forcing him down on his bed, and constraining him. G. determined, as he afterwards acknowledged, to take J.'s life the first opportunity. He made efforts, however, to control this determination, and concluded to abandon any homicidal attempt. The homicidal purpose, without any fresh provocation, afterwards revived; and two or three months after the first occurrence, with a view to an opportunity for committing the homicide, he asked permission to accompany a party going to cut ice, which was granted, for reasons satisfactory to the superintendent, on a promise that he would not misbehave, the superintendent being then ignorant of the occurrence between G. and J. The same attendant, J., was of the party, and had charge of G. They went to the ice-field pleasantly together, and G. was intrusted, at his own request, with an ice-axe or cutting tool. On arriving at the spot G. approached J. with the intent to kill him with the axe. He subsequently informed the superintendent that he was arrested in his purpose while in the very act of executing it, with the weapon upraised, by a sudden reflection that it "would only make a muss," without any advantage to himself or others, and refrained.

But for G.'s subsequent voluntary disclosure of the circumstances, supposing the homicide to have been actually committed, it would have been deemed by some an *impulsive* homicidal act, although he was not a homicidal or violent patient; but his disclosure shows that it would have been the deliberate act of a man laboring under

insanity, referable to a former actual provocation, and the fulfillment of a purpose long, although intermittingly, entertained. If it had been actually committed, the act would have been an insane act, although not an impulsive one. The impulse, after all, was to *refrain*; and it was acted on by a *maniac*, and one who continued so for some time afterwards.

So Sloo's homicide of Hall was not an impulsive, although an insane act. That he sought for, and finally obtained, a pistol for the purpose of avenging his fancied injuries upon Hall, conflicts with the idea that the act was an impulsive, as contradistinguished from a deliberate one, although the whole manner of performing it exhibits insanity.

A sane man is as likely to act criminally on an impulse as an insane man; and any previous preparation by either belies an impulse, unless in such cases where dangerous weapons are habitually carried for offense and defense. If Sloo, for instance, who did not habitually carry a pistol, had met Hall accidentally and unprovided with any weapon of offense, and had on the spur of the moment and of some present provocation, by word, look, or deed, on Hall's part, seized upon any chance thing at hand and inflicted a mortal wound, it would have been an *impulsive* attack in the proper sense of impulsiveness, as distinguished from any prior deliberation to do a mischief. But this act, as he committed it, was evidently *non-impulsive*; it was insanely deliberate—brooded over—and finally effected according to the common mode of insane deliberation, quietly, without immediate provocation, without any sort of notice, in the light of day, in the presence of witnesses, and with a disregard or unconsciousness of consequences that usually accompanies no deliberate criminal act of a man in the possession of his senses. Such a man would seek concealment for the execution of the deed, and for escape from its retribution. While the insane man strives to hide his *approaches* towards his violent purpose, and rather expects approval on its *accomplishment*, the sane man strives to hide both. He is more fearful of discovery when the fact is done, than of being detected in his preliminary movements.

The question of expertness seems to have been put on the right ground in the course of the trial. Dr. Herod, not professing to be an expert in insanity, or in the special disease in question, was admitted to prove simply the existence of disease and its character. Dr. McFarland was specially summoned as an *expert in insanity*, to give his opinion and inferences from the facts proved, and from his examination of the defendant. Drs. Roe and Spencer were admitted as experts in the particular disease, and its common effects upon the brain and mental powers. The lay witnesses were confined to facts, and precluded from drawing inferences or expressing opinions as to rationality of conversation or conduct. Dr. Condon although permitted to testify, is such an entire inexpert, both as to the disease and as to insanity, that the most stupid jury would regard his testimony as worthless; and the only failure on the part of the judge seems to us to be in not having refused the witness a further hearing, except as to *facts* within his knowledge, after the public acknowledgment of his inexpertness. Experts should only be confronted by experts; otherwise questions that can be solved by experts only, might as well be decided by the vote of a town-meeting, where possibly swine would be affirmed to be rational beings on the sworn opinion of such a witness as lawyer Bartley, who thought, upon oath, a hog could reason.

That the verdict of the jury was right is corroborated by the fact, stated at the conclusion of the report, that the accused was subsequently, by another tribunal, committed to the Illinois State Hospital for the Insane. Dr. McFarland has thus an opportunity of ascertaining from personal observation the correctness of his inferences as to the real condition of the accused at the time of the homicide; and we hope that if the verdict was founded on any misapprehension he will deem it a duty to the medical and legal professions to make it known.

THE PATHOLOGY OF INSANITY. BY J. C. BUCKNILL, M. D.

[Concluded from Vol. XIV, page 363.]

[The conclusion of this valuable essay is taken from the new MANUAL OF PSYCHOLOGICAL MEDICINE, by Drs. Bucknill and Tuke.]

The Humoral Pathology of Insanity.—The qualitative analysis of the blood of the insane has been made a subject of investigation by some German and French Physicians. Although the somewhat difficult manipulations needful to obtain accurate and trustworthy results in an investigation of this kind, may be a severe test of the chemical abilities of alienists, we must admit that the uniformity of the gross results obtained by several independent inquirers, are sufficient to justify the important conclusion, that the condition of the blood of the insane is opposed in character to that which is found to obtain in inflammatory diseases, and that it approximates to that found in non-inflammatory neuroses, and in febrile affections. Hittorf, of the Siegburg Asylum, analyzed the blood of seven patients suffering from acute mania; the results he obtained were, that in six out of the seven cases, the fibrine was below 2.5, the percentage of fibrine given by Becquerel and Rodier as the amount of this substance in healthy blood; that, in the same number of cases, there was a diminution of the globules; and, in five out of the seven cases, there was an increase of water. In Hittorf's analysis of healthy blood, however, the amount of fibrine is marked as low as 1.4. The disagreement with the result obtained by physiological chemists of reputation, is sufficient to detract from the value of his conclusions.

Erlenmayer has analyzed the blood of patients suffering from various forms of mental disease. The conclusions he arrives at are, that the venous crisis, *id est*, the increase of globules, is very rare among the insane, and principally occurs in idiocy and delirium tremens; and that the fibrinous crisis, *id est*, increase of fibrine, is

equally rare in cases of insanity free from complications which would tend to modify the proportions of this constituent.

M. Michea, who has investigated the condition of the blood in general paralysis, found that, in the majority of cases, there was an increase in the number of globules; in the majority, also, the quantity of fibrine was normal, in some it was diminished. The inorganic matter of the serum representing the albuminous constituent was diminished in little less than one-third of the cases; from which he infers, that "the spontaneous diminution and the insufficient formation of the albumen of the blood, are the immediate causes of a certain number of the cerebral effusions which occur in the paralytic insane."

The analysis which Becquerel and Rodier obtained of blood in acute inflammations (*Path. Chem.*, p. 105) shows a proportion of fibrine of 5.8 per cent., the normal standard being 2.5; a decrease of globules from the normal standard of 135 to 123.3; a decrease in the albumen of the serum, and also the alkaline salts; and an increase of fatty matters. In encephalitis, Poggeolli and Marchal found the fibrine increased to 6.08, and the globules decreased to 106.05, affording a remarkable contrast to the proportion of these constituents found by Hittorf in acute mania: the highest amount of fibrine found by the latter being 2.03, and the lowest amount of globules being 109.191.

The condition of the *Urine* in insanity has been carefully investigated by Dr. Sutherland, to whose valuable papers on this subject in the Medico Chirurgical Transactions of 1844 and 1855 we must refer our readers. A comparison of the results obtained by him, with those of Dr. Bence Jones, in his inquiry respecting the proportion of phosphates in the urine of phrenitis, delirium tremens and general paralysis, is highly instructive.

In four out of five cases of acute mania, Dr. Sutherland found the proportion of phosphates above the mean quantity present in health; in the fifth case it was nearly of the healthy standard. In one case it was as high as 9.73, being nearly equal to that found by

Dr. Bence Jones in delirium from fracture of the skull. Dr. Sutherland believes, however, that this successive elimination of the phosphates is rather a measure of the consumption of nerve-force than of inflammatory action. The results of treatment, of blood analysis, and of *post-mortem* investigation, prove to him that the condition of the brain in mania is not inflammatory.

In acute dementia the amount of the phosphates was remarkably deficient. It was lowest when the mental faculties were most feeble. In one case, the proportion was 2.49, when the powers of the mind were in abeyance; when they again began to be exercised, the proportion increased to 5.1. In another case, when first examined, the proportion was 5.23; but, as the disease advanced, and when the patient was unable to comprehend what was said to her, the phosphates fell to 2.37.

In general paralysis there was great deficiency of the phosphates, these falling, as the disease advanced, from 3.42 to 1.57. In chronic mania and chronic dementia the amount of phosphates was below the average in every case but one, a patient in whom the powers of the mind were little impaired. Dr. Sutherland thinks that these results correspond in a very interesting manner with the analyses of the brain and of the blood in mental diseases. The tissue from which the phosphates are eliminated is the albuminous: and, according to L'Heritier, the brain of infancy and old age, compared with that of the adult, presents a minus quantity of albumen, fat, and phosphorus; while, according to Couerbe, there is a plus quantity of phosphorus in the brain of acute mania.

In the reaction of the urine, the observations of Dr. Sutherland are opposed to those of Erlenmayer, who, in his thesis "*De Urina Maniacorum*," states that the urine is generally alkaline, in recent cases of mania. Dr. Sutherland found that, in 125 cases of recent mania, admitted during two years at St. Luke's, the urine was acid 111 times, alkaline 13 times, neutral 1; and that, in 100 cases of chronic mania and dementia, it was acid 61 times, neutral 6, and alkaline 33 times; in 25 cases of paralysis of the insane it was acid in 12, neutral in 1, alkaline in 12.

The Pathology of General Paralysis.—This interesting, but hopeless form of disease, may be said to have been unknown until it was fully described in the admirable "Memoire" published by Calmeil in 1826. Haslam, it is true, in his "Observations on Madness" (2nd edit., 1809, p. 259,) refers to its symptoms in a manner which can leave no doubt that their peculiarity had engaged his attention; but no further notice was taken of it until Bayle's thesis, in 1822, and Calmeil's work in 1826, called to its remarkable phenomena, the attention of all medical men practicing in lunacy. Notwithstanding the frequency of its occurrence, and the large proportion which it contributes to the mortality of the insane, it can not be said, even at the present time, to be well known to the profession at large. In his eleventh Lecture, Dr. Conolly states that he had never noticed it until he read Calmeil's work; and that, "although we are familiar with this form of disorder in asylums, and learn to recognize its earliest appearances, I frequently find its existence unrecognized or unknown, when attending private cases."

The following are Calmeil's conclusions respecting the pathology of this disease :—

1st. The alterations found within the skull of patients dying from general paralysis (namely, injection and wearing away of the bone; injection of the dura mater, and separation of its fibres; effusion of serosity into the cavity of the arachnoid; false membranes, organized and not organized; cysts filled with blood between its two laminae; simple arachnoidean hæmorrhage; œdema of the meninges; vegetations of the pia mater; injection and thickening of the membranes; development of their blood-vessels; adherences between the pia mater and the cerebral convolutions; removal of the gray substance; softening, induration, increased color, and injection of the same substance; consistence and injection of the white substance; redness and injection of the ventricular villousities [query, choroid plexus]; serosity in the ventricles; apoplectic cysts; erosions of the convolutions; a nucleus [noyau] of an unknown nature; softening either of the brain or of the spinal marrow); do not sufficiently explain the symptoms observed during life.

" 2nd. One is compelled to avow the insufficiency of these alterations, on account of their not being constant, and on account of their being found in patients who were not paralytic, and in the progress of whose disorder there had been no resemblance to the one peculiar to general paralysis.

" 3rd. Nearly all these alterations, examined with impartiality, indicate the existence of a chronic phlegmasia in the encephalon, which exerts its principal ravages on the superficies of the convolutions, on the gray substance and the envelopes of the brain.

" 4th. The conclusion, therefore, is permitted, that it is a chronic inflammation [*phlegmasia*], which gives rise to general paralysis by determining to the brain a single modification [*modification identique*], which we have not known how to appreciate; and which, independently of the changes recorded, may have existed in all the individuals whom we have dissected.

" 5th. That it happens in a case of general paralysis that the brain presents no appreciable trace of inflammation, this would be no certain proof that inflammation had not existed. After having existed during a certain time, it might have disappeared; the alteration which it had occasioned, and from which the general paralysis resulted, might continue to embarrass the movements.

" 6th. General paralysis will always offer specious arguments to the partisans of nervous paralysis. Convinced that a function may be injured, without the organ being so upon which it is dependent; seeking to establish the opinion that the cerebro-spinal system may remain sound, even when the voluntary movements are abolished, they select those cases of general paralysis where the sole cadaveric results have been, for example, only some infiltration into the meninges, some accumulation of serosity between the laminae of the arachnoid, some injection and discoloration of the gray substance, some granulations of the membrane of the ventricles; and they maintain that these results are not sufficient to cause such grave symptoms. In vain may we invoke the existence of an inflammation, which, upon an organ so frail as the brain, would exercise a fatal influence: they demand the demonstration of the changes whose existence we

admit: and since, in this respect, there is a real difficulty in satisfying them, they place the advantage to their side."

Such are the conclusions, on the pathology of this disease, to which the author comes, from whose admirable monograph it first became known to the medical world. Further research has made no important addition to his careful observations; and although we can not accept the interpretation which he gave, in the spirit of the prevailing Broussaism of his day, that the changes he found were the result of a chronic inflammation, we may admit the soundness of the broader proposition—that the disease depends upon "some one modification of the brain whose nature we have not yet learned to appreciate."

Other French alienists attribute the pathological cause of this disease to changes still more special and limited than those alleged by M. Calmeil. Thus Bayle, with whom Esquirol concurs, attributes it to a chronic form of meningitis. M. Delaye, to induration of the medullary substance. M. Bottex affirms that the meninges are always adherent to the cortical substance, and that any alteration in the medullary substance is rarely observed. M. Parchappe attributes it to the softening of the middle layer of the cortical substance, which permits the ready separation of the external layer. M. Belhomme confirms the alterations reported by others, in the superficial parts of the cerebrum, but adds, that the changes originating them extend gradually to the very centre of the organ. These discordant opinions lead necessarily to the inference, that the pathology of this disease is yet purely a matter of surmise. That degraded conditions of nutrition are commonly found in the brains of persons dying of general paralysis, is about all that can be stated as actual and reliable fact. The arachnoid is found opaque, but not so notably changed as to indicate the previous existence of inflammation, in the common acceptation of that term. There is atrophy, and sub-arachnoid dropsy. The gray cortical substance is obviously thinner than in health. The medullary substance is often discolored with pink mottling, or presents a slight shade of brown or gray. Its specific gravity is always diminished, a fact pointed out by the author in the *Re-*

port for the Devon Asylum, for the year 1851, and more fully proved in his paper on the Pathology of Insanity, in the 29th Part of the *Medico Chirurgical Review*. In the above mentioned Report, the author expresses his opinion on the pathology of this disease as follows; "I believe that General Paralysis is essentially a disease of nutrition, affecting the whole nervous system,—that nerve-matter, both in the vesicular and tubular portions thereof, is imperfectly produced,—and that the cerebral or generative, and the conducting functions are consequently interrupted. If chemical research should inform us hereafter of what pure neurine consists, it may perhaps be enabled to show that, as in rickets, the utility of the osseous system is injured for want of certain earth-salts; so, in this disease, the atrophy observable in the gross mass of nerve tissues, and the general decay of function depends upon want or change in the quantity or quality of the neurine." We adhere to this opinion, which we believe justified by the fact first ascertained by the author, and published in the above mentioned Report, that, "in the paralysis of the insane, the irritability of the muscles and the excito-motory function of the nerves is nearly lost; in ordinary paralysis, whether dependent upon lesion of the spinal chord, or of the brain, these functions are retained. I think this point important, as it tends to prove that the cause of this disease is not localized in any one portion of the cerebro-spinal axis, but consists in some morbid change, pervading the whole nervous system, and probably implicating the distal fibrils."

That this disease consists in some vice of nutrition, whose nature is yet unknown, but whose extent embraces the whole of the nervous system, and is by no means limited to the encephalic centres, is a view which also appears to us to derive support from the atrophied and changed condition of the spinal chord. In the above mentioned Report, the author states; "I have made numerous examinations of the spinal chord, and always have thought that it presented a less diameter than ordinary. As, however, I could not verify the rough estimates of the unassisted senses by any satisfactory appliances of measure or of weight, I am unable to advance my

knowledge of this fact as satisfactory or conclusive. Satisfactory proof that the spinal chord is atrophied would be of great importance; for, whilst most of the changes observed in the brain itself are common to other morbid conditions, it would probably be found that atrophy of the chord, in addition to these changes, is peculiar to this disease."

Since this was written, we have paid much attention to the condition of the spinal chord in general paralysis. We have weighed the medulla oblongata, and the upper portion of the chord, in many instances; but, although our conviction is that its absolute weight is greatly diminished, the want of a trustworthy normal standard of comparison incapacitates the proof. The white fibrous matter of the medulla and the chord have appeared to us indurated, as well as diminished in volume, while the columns of gray substance in the chord and the gray matter of the olivary bodies, have presented a deeper color, often tinged with brown, and a softened consistence. The membranes of the chord, also, have, in many instances, been rougher than usual, often accompanied with a dark gray discoloration.

Such are the gross changes which have presented themselves to us. When the microscopist and the chemist have succeeded in demonstrating the fundamental changes of structure which undoubtedly exist in the special nervous system, in such diseases as tetanus and hydrophobia, we may expect their invaluable aid in the elucidation of the true nature of the pathology of the interesting disease under our present notice.

PROCEEDINGS OF THE THIRTEENTH ANNUAL MEETING OF THE ASSOCIATION OF MEDICAL SUPERINTENDENTS OF AMERICAN INSTITUTIONS FOR THE INSANE.

Reported for the Journal of Insanity, by Geo. F. Shrady, M. D.

THE Thirteenth Annual Convention of the Association of Medical Superintendents of American Institutions for the Insane was held at Russell's Hotel, in the city of Quebec.

ORGANIZATION.

President.

Dr. ISAAC RAY, Butler Hospital for the Insane, Providence, R. I.

Vice President.

Dr. T. S. KIRKBRIDE, Penn. Hospital for Insane, Philadelphia, Pa.

Secretary.

Dr. C. H. NICHOLS, Gov't Hospital for the Insane, Washington, D.C.

Treasurer.

Dr. JOHN S. BUTLER, Retreat for the Insane, Hartford, Ct.

The following members were present :

Canada East.—Dr. J. DOUGLASS, Dr. JOSEPH MORRIN, Dr. C. FREMONT, and Dr. A. VON IFFLAND, Lower Canada Lunatic Asylum, Quebec.

Canada West.—Dr. JOSEPH WORKMAN, Provincial Lunatic Asylum, Toronto.

Maine.—Dr. J. M. HARLOW, Maine Insane Hospital, Augusta.

Vermont.—Dr. WM. H. ROCKWELL, Vermont Asylum for the Insane, Brattleboro.

Massachusetts.—Dr. JOHN E. TYLER, McLean Asylum for the Insane, Somerville. Dr. MERRICK BEMIS, State Lunatic Hospital,

Worcester. Dr. G. C. S. CHOATE, State Lunatic Hospital, Taunton.
Dr. EDWARD JARVIS, Private Asylum, Dorchester.

Rhode Island.—Dr. ISAAC RAY, Butler Hospital, Providence.

New York.—Dr. M. H. RANNEY, New York City Lunatic Asylum. Dr. JOHN V. LANSING, Kings County Lunatic Asylum. Dr. E. H. VAN DEUSEN, First Assistant Physician, State Lunatic Asylum, Utica.

Pennsylvania.—Dr. JOHN CURWEN, Pennsylvania State Lunatic Hospital, Harrisburgh. Dr. J. H. WORTHINGTON, Friends' Asylum, Frankford. Dr. EDWARD A. SMITH, Assistant Physician, Pennsylvania Hospital for the Insane, Philadelphia.

Georgia.—Dr. THOMAS F. GREEN, State Lunatic Asylum, Milledgeville.

Mississippi.—Dr. W. B. WILLIAMSON, State Lunatic Asylum, Jackson.

Missouri.—Dr. T. R. H. SMITH, State Lunatic Asylum, Fulton.

Kentucky.—Dr. WILLIAM S. CHIPLEY, Eastern Lunatic Asylum, Lexington.

Illinois.—Dr. ANDREW MCFARLAND, State Hospital for the Insane, Jacksonville.

Indiana.—Dr. JAMES L. ATHON, State Hospital for the Insane, Indianapolis.

Ohio.—Dr. R. HILLS, Central Lunatic Asylum, Columbus. Dr. J. J. McILHENNY, Southern Ohio Lunatic Asylum, Dayton. Dr. W. MOUNT, Hamilton County Lunatic Asylum, Cincinnati.

Michigan.—Dr. E. H. VAN DEUSEN, Asylum for the Insane, Kalamazoo.

Benj. F. Pickney and W. T. Pickney, Esqrs., of the Board of Ten Governors, N. Y. City. Dr. Geo. F. Shrady, of the N. Y. Hospital, and Dr. Grimes and Gen. Brady, of the Board of Commissioners of the Indiana Hospital, were in attendance.

According to the previous adjournment, the Association was called to order at 10 o'clock, A. M., Tuesday, June 8, 1858. Dr. Isaac Ray, President, in the chair.

The Secretary being absent, Dr. Curwen was elected Secretary, *pro tem.*

After the reading and approval of the minutes of the last meeting, the following gentlemen were elected to serve on the usual committees :

Drs. Douglass, Fremont, and Morrin, the Business and Financial Committee.

Drs. Curwen, Smith, and Choate, a Committee to recommend the time and place of the next meeting of the Association.

The Secretary then read letters from the following gentlemen, expressing their regrets at being unable to attend the meeting : Drs. Parker, of S. C., De Wolf, of Halifax, N. S., and Litchfield, of Kingston, C. W.

Dr. Joseph Workman, of Toronto, then read a very elaborate paper on the Pathological Anatomy of the Brain in General Paralysis.

He introduced it as follows :

MR. PRESIDENT, AND GENTLEMEN :

The only apology I can offer for the details which I am about to submit to your consideration, is, that I regret their imperfection, and would gladly have made them more worthy of the attention of this Association. As a Canadian I feel grateful for the honor you have conferred on my country, in the selection of its venerable capital as your place of meeting in the present year ; and when I state, that in laying before you a few cursory observations on the pathological anatomy of insanity, too hastily gleaned in the course of other onerous and multitudinous labors, I offer them in acknowledgment of my deep sense of the distinction you have conferred on these British Provinces by your presence, and I trust that you will accept my meagre contribution in that spirit of forbearance and consideration, which, before a higher tribunal, gave fair value to the widow's mite.

It is totally impossible for any medical superintendent of a large insane hospital, to appropriate to pathological investigation, that time and minute attention, which the importance of the subject, and the present advanced state of medical science, demand. We must either be content with superficial and hurried observation, or deny ourselves entirely the indulgence of autopsical enquiry. Microscopic and

chemical research must be left in the hands of those who have the necessary time for such work. True, indeed, the results of such nice investigation, have not *yet* been so very large or decisive, nor the conclusions arrived at so harmonious, as to render our own poverty of observation so appreciable as it otherwise would be ; but the pathology of insanity is yet in its earliest infancy, and its great revelations must be expected from those who devote themselves exclusively to its cultivation. It will be our duty, and high privilege, to profit by the labors of these apostles of science ; and assuredly they will deserve our warmest gratitude. In the mean time, while awaiting with patient hope, the dawning of a fuller light, let us not deny ourselves the benefit of our own little tapers, though their rays should not extend beyond the circumscribed limits of our own darkness.

The advancement of sound pathological science, in the present day, depends perhaps more on the careful consideration, and proper application, of existing, simple facts, than on the discovery of additional or complex ones. The magnetic telegraph is not many removes distant from Franklin's wire kite-cord. The steam-force which propels the railroad-locomotive, the steamboat, or the cotton-mill, is not different from that which the old man, smoking his pipe, saw elevating the lid of his tea-kettle. We may spend much time in search of great truths which ultimately we may find have all the while been in our fingers ; just as the butcher, after fruitlessly hunting everywhere, and in many a dark corner, for his knife, at length discovered that it was, and had all the time been, in his mouth. I cannot avoid believing that in the morbid lesions of the brain, and other organs of the human frame, even as observed by the unaided eye of the dissector, there is much significance ; and I am tardy in yielding assent to the dicta of those, who rate at low value the revelations of even the common scalpel.

If it is asserted that the organization of the brain and the nervous system, is so delicate, peculiar, and impalpable to sense, and the relations of mind and matter are so inapproachably obscure and inexplicable as to preclude all hopes of our obtaining, from ordinary autopsical examinations, any light which may enable us to comprehend

more clearly, and to treat more successfully, the malady of insanity, I may receive the dictum with that deference which ignorance should always evince towards dogmatism. Counter-assertion is, to be sure, as legitimate as assertion; but truth does not consist in either; and it is better to plod on patiently in the beaten path of enquiry, than to go to sleep under the hypnotic influence of negative prophecy. I submit the following details to your consideration, more with the hope of eliciting, than of communicating, valuable information; and I assure you that I shall most thankfully appreciate whatever remarks you may be pleased to make, on any of the subjects now brought under notice.

[The paper, here introduced, is printed in part as the first article of the present number of the JOURNAL: the remainder will be given in the number for October.]

Dr. Douglass stated, in connection with the gyratory movements referred to by Dr. Workman, that the tendency to move in that way was frequently seen in lesions of the base of the skull.

"I recollect a case," said he, "of a gentleman upon whose head a barrel of flour fell, and among other injuries which he sustained was a fracture of the base of the skull. He was rendered perfectly insensible for many days, and during this time was continually gyrating in bed. He ultimately recovered so as to go about, but he was left with a difficulty in his speech. He would wish for one thing, and ask for another; wishing for a fork he would ask for a tongs, and would become very angry with those who would not understand him. He went into the country soon after, and died after a year's residence there. I succeeded in getting the skull, which gave me an opportunity to ascertain where the lesions of the brain had been."

In the same connection Dr. D. referred to another case, of a lady who fractured the base of her skull, and was insensible for many days. When, however, the comatose condition passed away, and sensibility returned, "she spoke very fluently, and scolded very much, but nobody understood what was said; she seemed to speak

German. She recovered. I then asked her if she understood German. She said 'No, no language but the English.' Did you ever speak any other language? 'Yes,' said she, 'when I was a little girl, being brought up among the Moravians, in Pennsylvania, I spoke nothing else.' At that time she could not speak a word of German."

Dr. Choate stated, in relation to the frequency of the occurrence of general paralysis in the two sexes, that he did not think that since the opening of the Hospital at Taunton, they had received a single female suffering from general paralysis. From two to five cases of the disease in males had been received annually. "I think," said he, "the greater part of these cases occurred in men of intemperate habits, and have always supposed there was some general connection between the habit of using intoxicating drinks to excess, and this form of disease. I recollect several now under treatment, who have been intemperate."

Dr. Workman said, that out of fifteen cases of this disease, he had only seen one in which the patient had been intemperate. Intemperance killed its victims by other and numerous resulting maladies, and often took a shorter cut.

The most marked case of insanity connected with intemperance that he had seen, occurred about a year ago, in a member of a very enterprising family in Canada. He was engaged largely in speculations. His father and mother died of paralysis, and so also did many of the family. He had the money-making propensity in a remarkable degree, and did not show the marked phenomena of paralysis, but still there was very marked cerebral disease. I assisted at the *post-mortem* examination, and never saw a brain more softened. On removing the calvarium, the brain literally flowed out like melted butter.

He regarded general paralysis more as a consequence than a cause; that far from intemperance always being causal, it was often the result of insanity; at all events the number that could be said to have had their origin in intemperance, had been, in his observation, very small. He thought that in a great many cases insanity resulted from disease of the stomach. He believed that not more than five per cent. of the cases of insanity in the Toronto Asylum had been

directly caused by intemperance ; but the number that were indirectly ascribable to intemperance in their progenitors was very great. He did not believe that intemperance had such an extensive connection with general paralysis as was made out to exist. In conclusion, he asked the opinions of the members present upon this subject, at the same time thanking them for the patient and considerate manner with which they listened to the reading of such a lengthy paper.

Dr. Athon said, that in the Indianapolis institution, within the last five years he had had five distinct cases of *paralysie générale* ; three being males and two females. The males were temperate ; they all had a monomania on the subject of making money, and they were all destructive. One of them tore all his blankets in strips, and would destroy articles belonging to patients, for which he would pay them liberally. One of the females died, and gave an opportunity for a *post-mortem* examination to be made. The meninges were hardened. "We found," said he, "water within the brain. The left lung was destroyed. The heart was forced to the right side, and covered with more than one-fourth of an inch of fat." He stated that in his locality the people have a horror of *post-mortems*, so that he is compelled to carry them on with the utmost secrecy. These cases were from the commercial community.

In connection with the remarks made by Dr. Douglass of patients who spoke the language of infancy only, he cited a case of a lady who, when very young, spoke the Pennsylvania German. Her husband married her when she was eighteen years of age, and was not aware of the fact. Soon after she became insane she conversed altogether in German, so much so that he had to procure for her a German attendant. When he next saw her husband he said to him, "Why, your wife is a German?" "That is not possible," said the husband, "for she can't speak a word of German." "You are mistaken," said the Doctor, "she speaks nothing else, and we have to keep a German girl constantly by her. She can't speak a word of English." The husband returned home, and saw her parents, and they told him she talked in German until she was seven years of age, when she was removed to Indiana.

Dr. Green had not seen a case of general paralysis in eight years. He did not think that those who had notions of immense wealth were all cases of general paralysis. He had seen a number of cases of general paralysis where this peculiarity did not exist.

Dr. Chipley stated that general paralysis was a very rare disease in the West. He had seen but three cases within three years in Kentucky. All were males, of intemperate habits. He had no opportunity of making a *post-mortem*. He thought in the present state of the science, observation had developed nothing in relation to the real character of the disease. "The very paper read this morning," said he, "only goes to show the variety of lesions that may be classed under the one head, general paralysis. There seems to be no uniformity existing between the lesions, and the form of disease."

Dr. Smith thought the pathology of insanity was an important and highly interesting subject for the Association to discuss, and one that had heretofore, perhaps, been too much neglected. The most acute and erudite minds in the profession, who had investigated it, differed widely in opinion. Some regarded irritation the true pathological condition, some exhaustion or nervous exhaustibility, and others congestion, &c.; but he believed there were very few, at the present day, who attributed the phenomena of insanity to inflammation, in the ordinary sense of the term. All, doubtless, believed inflammation may be a cause of insanity by inducing the secondary pathological state upon which it depends, but the number, he supposed, was very small, who regarded it as the actual condition of insanity. This great contrariety of opinion had, no doubt, to a great extent, resulted from the fact, that *post-mortem* examinations had developed no uniformity in the morbid appearances of the brain. Dr. Workman well deserved the thanks of the Association for his paper. His cases were certainly very interesting and suggestive, and seemed to prove the ordinary opinion,—that general paralysis was associated with or resulted from softening of the brain,—to say the least, was not in all cases true.

Dr. Ray said: "The general questions presented in the paper are of the most interesting character, and as such ought to receive the at-

tention of the Association. We have discussed almost every thing else, and I think now attention may well be directed to the pathological anatomy of insanity. The general questions are: How far the pathological appearances after death may be considered as connected in the relation of cause and effect with the mental symptoms,—the ordinary phenomena of mental disturbance? How far the form of disease which passes under the name of general paralysis may be considered as a specific one; and how far it is related to other forms of disease? It is hoped that the paper will draw out a full discussion of these interesting points."

Dr. Curwen said: "I have had no opportunity of examining any case of general paralysis, as no cases have died under my charge; though I have had several cases under my care, which have been caused by intemperance and riotous living, occasionally some one from high positions in society. I have now under my care a man regarding whom I have not the least doubt that he has all the symptoms of general paralysis, but he is physically able to be about. The great wonder is that he has been able to hold up under the constant degree of excitement that he is under. He has all these delusions of immense wealth and power, has some hesitancy in speaking, and also a peculiar dragging of the limb. This is the only case I have at present in the institution. This man came from Philadelphia."

Dr. Hills said: "I have had a few cases of general paralysis since I have been connected with our institution. When I say a few, I mean three or four that were undoubtedly cases of general paralysis, but in no instance have we had an opportunity to make an autopsy. I have two cases now in the institution, the progress of which I am watching with a good deal of interest. They have recently come in, and are from the better walks of society. One is a bachelor, a dentist, forty years of age, a man of most excellent habits in every particular, and I think that has been the case with all with whom we have had to do. The other is thirty-five years of age, and a married man. We have had no females. One of the cases was sent to me from the penitentiary, fifty years of age, who had been diseased for a long time. He had correct habits of temperance, but

was sent to the penitentiary for an attempt at rape on his sister. At other times he was convicted of parricide, and other great crimes, doubtless the result of disease. He died some six or eight weeks after my first knowledge of the case. I was unable to make a *post-mortem*, being confined to my bed at the time."

Dr. Williamson said: "I have a young lady, aged nineteen, admitted about two weeks since, in whom I suspect this disease to exist. Her history was given by her father. It seems she got wet while going to a party, having her catamenial discharge at the time. A severe attack of fever followed, from which she recovered. Soon after she went to another party, and, when nearly to the place, her horse threw her, and she remained insensible for several hours. Physicians treated her, and thought that she had recovered. In the course of a month or two however, it was discovered that she was getting melancholy. She was advised to travel, and was taken from Mississippi to Texas, but after remaining there a few months, she returned. She drags her left leg when walking, and her left shoulder is a little lower than the other, as though she had a slight lateral curvature of the spine. I think that there is some organic disease present, that will result in general paralysis. This is the only case that has come under my observation."

Dr. Worthington had seen a number of well-marked cases of general paralysis in men, and one in a female, but had never had an opportunity of making *post-mortem* examinations. In regard to the character of these cases presenting the usual symptoms of general paralysis depending upon certain well-defined lesions, such as thickening of the membranes, and their adhesion to the cerebral pulp, it appeared there was some reason to doubt whether the connection between the symptoms and the lesions were so constant as to justify their being considered as constituting together a distinct form of disease. In many cases the ambitious monomania, the faltering speech, the tottering gait, with tendency to cerebral congestion are well-marked; in others, one or more of these characteristic symptoms may be wanting, while the disease proceeds to a fatal termination as surely as in the best-marked cases. For instance, a patient may con-

sider himself to be in the best possible health, and possessed of extraordinary mental and physical powers, (ambitious monomania) and present no appearance of paralysis, either in the organs of speech, or in those of locomotion, and yet die in the course of a year or two, from the effects of chronic meningeal inflammation. Another patient may present the tottering gait, and the hesitating speech, of general paralysis, with delusions perhaps of a painful character, and die in a short time, in an attack of convulsions, or apoplexy. Considering the organic lesions in cases of this kind to be owing to chronic meningeal disease, there seemed to be some reason to doubt the propriety of making a distinction between them, and the other class of cases, in which the whole group of symptoms is present. In most cases, the disease seemed to originate in causes which tend to depress the vital energy, and to wear out, or use up the brain. Some of the cases have been temperate in drinking, but intemperate in regard to occupation. One man, a tailor, spent nearly the whole of the twenty-four hours at work at his trade, for several weeks together, and his friends attributed his attack to this cause. The remarkable prevalence of this disease in the European hospitals, is worthy of remark. It has given better opportunities for its study there than in this country, and he believed it was generally attributed to intemperance and sensuality; but there probably remained some cause yet to be explained, to account for the difference in the frequency of its occurrence in Europe and in this country.

Dr. Ray said: "Gentlemen, we have been listening to a paper of some length, consisting chiefly of a record of pathological conditions observed after death. It is suggested as a fair question, How far these facts have any import or value to us, as students of insanity? From a very distant period it was thought that the knowledge of the essential cause of insanity might be learned from inspection of the brain after death. Consequently a great many observations have been made. A large number of observers have recorded certain pathological effects as having occurred in a large proportion of cases; some more and some less. By a few observers it has been stated, that in a small proportion of cases, no pathological change could be

observed after death, and many have been struck with that fact. Esquirol, it is well known, made very little account of these pathological changes in the brain, and he was always inclined to think that the essential cause was something not very obvious to the senses. He dwelt more upon the changes found in the digestive organs than those in the brain. It is always questionable, how far these changes have any thing to do with the essential condition, and whether they are not accidentally the result of some prior change. That suspicion is strengthened by the utter want of uniformity which they present in cases apparently similar in their psychological character. I apprehend that no man, no matter how often he has examined the brain after death, would be bold enough to say beforehand positively what he would find, judging from the symptoms that developed themselves both mentally and physically. It is not only so in general paralysis, but in other diseases where the brain is involved. I have never yet found the man who would stake his reputation as a pathologist upon any such predictions. Well, then, if these pathological conditions are not the cause of the disease, if they occur subsequently, (and I apprehend that no one would venture to say that in the very early stages of disease, an inspection of the brain, if possible, would show us any of these lesions,) of course they must depend upon some prior change. This state of the case obliges us to believe that the initial step is some change in the organism beyond the reach of our senses. The power of minuter examination, which has been put into our hands by the microscope, has led to a great many microscopical examinations of the intimate structure of the brain as affected by disease. These may throw some light on changes which have been regarded as of little consequence. The mere change of color, for instance, although apparently only a matter of appearance, may be indicative of very considerable, essential change of the cerebral substance. Whether any good will turn out from any such investigations, remains to be seen. At all events, I see no reason why we should not pursue them. Every thing that is collected to throw any light upon the subject, even if it shows our own ignorance, is valuable, and deserves to be studied."

"The relation of general paralysis to other forms of mental disease, is a subject which strikes me as one which yet remains to be thoroughly investigated. We have been in the habit of considering it a special disease, and associating it with a special group of symptoms. In a great proportion of cases the symptoms are pretty uniformly those which are attributed to it, and after death you will find more or less organic lesions. It has struck me as impossible to draw a dividing line between the so-called general paralysis and many other cases that would hardly come under that category. I think we frequently see cases where there is no no paralysis, no lesion in locomotion, and no ideas of unbounded wealth or power, but which have a general physiognomy that leads us to say that the patient will not survive long. We may not be able to give any satisfactory reason for thinking so, but we have no doubt respecting the result, and after death the brain shows the same class of lesions. I am inclined to think that the pathological condition in these cases is very like that to be found in general paralysis."

In conclusion, Dr. Ray urged the younger members, whose sense of intellectual responsibility is supposed to be keener than that of their elders, to look into the subject and see how far its microscopical examinations would throw light upon the disease.

The Business Committee next made the following report of arrangements: That the remaining part of the day be occupied in a visit to the Hôtel Dieu Nunnery, Laval University, Citadel, and Wolfe's Monument. On Wednesday, at 11 A. M., to witness the Drill upon the Esplanade, then visit the Marine Hospital, and proceed to the Quebec Lunatic Asylum, at Beaufort. On Thursday, at 9 A. M., to leave for Grosse Isle. On motion of Dr. McIlhenny, the meeting then adjourned to meet at 8 P. M.

The members first proceeded, under the direction of Drs. Morrin, Douglass, and Fremont, to visit first in order the Hôtel Dieu Nunnery. This institution is under the charge of the Sisters of Charity, Nuns of the Grey order. Patients are required to pay a certain sum per week as board, in order to defray the contingent expenses. The

wards are comfortable, neat, and well ventilated ; in fact its whole management is most excellent.

They next proceeded to visit the Laval University. This institution was founded in 1636, by Monseigneur de Laval de Montmorenci, by whom it was intended solely for the benefit of the clergy ; but in 1854 it was raised by Queen Victoria from the status of a mere seminary to a university, where now are taught all the branches that go to make up a thorough education. The library of the institution contains over nine thousand volumes. It is, taken as a whole, the great institution of the Provinces, and one to which the Canadian may well look with pride.

Next was visited the Citadel, that has rendered Quebec so famous in history. Here they were shown every attention by Dr. Odell. After viewing to their entire satisfaction the many objects of interest in connection with this spot, they proceeded to the Plains of Abraham, and Wolfe's Monument. This monument is situated on the northern portion of the Plains, and consists of a pillar of granite, on the top of which rest a sword and helmet. The place on which this is erected was the spot where Wolfe expired at the battle of Quebec. The inscription on its base reads : " Here died Wolfe, victorious, Sept. 13th, 1759." This monument was twice erected, first by Lord Aylmer, in 1835, and again by Sir Benj. D'Urban, in 1849.

After viewing the various objects of curiosity and interest in the vicinity, the members returned to the hotel in time for the evening session, at 8 P. M.

TUESDAY EVENING.

The meeting being called to order by the President, Dr. Workman proceeded to read Part II. of his paper on the " Pathological Anatomy of the Brain in General Paralysis," at the conclusion of which he said :

" I think it is correctly observed by the President, that as a general rule it might be true that the pathological lesions found in autopsies are to be regarded as secondary results, rather than as the immediate transformation of structure in the brain, which is produc-

tive of insanity. I think it is an interesting question for us to ask ourselves, To what extent is disease in the brain compatible with curable insanity? I think in a formidable disease of the brain we have overtopping symptoms which are very distinctive: in general paralysis we have delirium of a peculiar character, and the physical phenomena, in relation to the motor system, are not less so. May it not be a question, if in all instances where the brain is much involved in diseased action, the case is necessarily desperate, and will result unfavorably?

"The President had remarked that it had been the opinion of Esquirol, that insanity was more likely to be the result of reactive sympathy in the brain from disease or disturbance of other organs. In the case, (91st, A. H.) was it the reflection of a diseased brain? or was it not the normal response of a comparatively healthy brain to the appeal of other suffering organs? Then it may be asked why is not insanity always the result in such cases? After a great deal of observation and consideration I have come to the conclusion that intense disease of the brain is incompatible with an active and persistent form of insanity. Such cases will end speedily, sometimes very rapidly, in dissolution."

The reading of Dr. Workman's paper was followed by the expression of thanks from almost every one present, but as none claimed to have had any extraordinary advantages in making *post-mortem* examinations, they were only too gratified to be simple listeners of a subject so ably treated of in the lengthy and instructive paper.

Dr. Tyler next read a paper, "On the Use of Anæsthetics in Quieting the Violent Insane," which gave rise to an interesting and instructive discussion.

Dr. Van Deusen stated that at Utica chloroform was preferred to ether, inasmuch as the latter was so often attended with unpleasant and depressing results.

Dr. Curwen stated that he never had used it.

Dr. Chipley had seen chloroform used in two or three cases prior to the time he took charge of the institution, and was unfavorably impressed with it. He had never seen ether used.

Dr. Smith stated that his experience had been very limited in the use of sulphuric ether, but so far as he had used it, he was pleased with its effects. This subject was brought before the Association, several years ago, by Dr. Ray, and a number of interesting cases presented, showing conclusively, that sulphuric ether had been, in his hands, a valuable and highly successful remedial agent. Since then, his attention had been more directed to it, and his limited experience corroborated the views, then expressed, and those presented in Dr. Tyler's paper. He had never used chloroform, and never expected to use it, as long as pure sulphuric ether could be obtained. He believed there was no well authenticated case on record of death having resulted from the inhalation of sulphuric ether, and regretted he could not say as much for chloroform. As anaesthesia could be as thoroughly induced by ether as chloroform, this fact was sufficient to determine his course in regard to preference.

Dr. Rockwell had used chloroform and sulphuric ether to a moderate extent, and so far had seen no injurious results attending.

Dr. Hills said: "I have had considerable experience in the use of chloroform, but not of sulphuric ether. Previously to my connection with our institution I used it for several years in obstetric practice, and in a variety of circumstances, always with beneficial results. I have never discovered any evil effects from its use, and think I am speaking within bounds when I say, in my private practice and in the institution, I have used from fifty to seventy-five pounds of this article. Probably a large amount of it was unnecessarily lost, for I use it without any stint, yet I do not know but I have a rather peculiar mode of delivering it. I crumple up a silk handkerchief loosely, and pour one or two drams of chloroform upon it, allowing in its use a free admixture of air. In this way the patient breathes a chloroformized atmosphere, in which probably one-tenth or one-twentieth is pure chloroform. I do not think I have used it in any instance but that I have been satisfied with its effects; especially when I have used it to quiet the violent insane. It is a very rare thing that I produce the full unconsciousness that is required for surgical operations. When I have a patient who is very much exhausted for want

of sleep, when the anodynes have failed to have their effect, I attend personally to the administration of this article. They almost always refuse to inhale it at first, but after a while they receive it more readily, become more and more quiet, then fall into a natural sleep, after perhaps half or three quarters of an hour, and have a quiet night under these circumstances, when I think no other drug would have had that effect. I do not think I could get along satisfactorily without the use of chloroform. I use it most on the female side of the house. Chloroform is used in the Western States, at least ten times as much as ether, and probably in much greater proportion."

Dr. Hills further stated, that in any given case he generally uses from a quarter to half an ounce, but has used half a pound. Of course this is not all taken by the patient; perhaps nine-tenths of it escapes. He referred to a case in which this article was used, where the patient, with general paralysis, was seized with violent and long-continued convulsions. Every remedy was tried that could be thought of, when chloroform was used, and in twenty minutes the patient was perfectly quiet. In convulsive affections of children, it acts like a charm. He thought chloroform was not used as extensively as it might be.

Dr. Bemis stated, that seven or eight years ago he first employed chloric and sulphuric ether. He had never used chloroform. He had used ether in several cases with marked benefit. After it was first employed it had fallen into disuse in his asylum, until within the last year, and he is now using it with very good results. He referred to a case that came under his observation seven or eight years ago, of a very excitable patient, a male, forty years of age, who was passing through one of those terrible paroxysms which tend not only to wear out the patient, but the attendants also. Day after day, night after night he suffered from terrible excitement, defacing his room, and obtaining no rest whatever. "After we had suffered it," said he, "as long as it seemed humane to wait, we one night put him under the influence of sulphuric ether. It left him in a quiet state, so that he slept comfortably all that night, and we heard no more from him until the next morning. He was comfortable during all the early

part of the next day. Towards night he became boisterous again, when the ether was administered, and he passed another quiet night. All the following morning he was comfortable, but becoming excited towards evening, another dose was given with the like result. This we kept up for many weeks. The patient gradually improved, and was finally discharged cured, and has had no trouble since. Ether has been used in similar cases, and with a like result, especially in females, procuring for them a refreshing sleep, and making them pass the next day in a quiet condition. I remember one case, in which the whole trouble of the patient was a fear of dragons, at night. He made us a great deal of trouble, but recovered entirely in a few weeks by the administration of ether. We have used the chloric ether with the same results as have attended the administration of sulphuric. In violent attacks of acute mania, we used it more with a view of its quieting influence, producing sleep, and found the same good resulting. I have in my mind two very bad cases upon whom we could put no clothing, nor give them any bed at night. We tried every means we could devise for comfort and convenience with no good attending, until chloric ether was administered, and the result was gratifying and successful. Lately, within the last two years, we have used it in a large number of cases, some in which it was necessary to procure sleep, and in other cases where it was necessary to produce quiet for some little time. Within two or three weeks, we have had three women, all of whom were passing through violent excitement, and who probably now are on a fair way to recovery. These women became so boisterous, that they would tear off their clothes, deface their room, break glass, &c. They were so bad that no attendants could control them. Ether was resorted to, and the result was truly gratifying. If they waked from sleep, they remained quiet during the day, and sometimes a whole week at a time. They now take ether once in every seven or eight days. These are cases in which we would have had to put on restraints, and kept in strong rooms. In either case, we could not keep them clothed properly, or make them feel comfortable. I can fully concur with the advice and experience of Dr. Tyler, though we have not used it to the extent Dr. Hill recommends."

In reply to a point in Dr. Workman's paper, Dr. Bemis said : " Within a month I have used chloric ether in a case where I supposed there was very severe suffering from the passage of a gall-stone. A female, about eighteen years of age, was admitted into the hospital, three months ago. After she had been there about two weeks, she was attacked with a very severe pain, so that she could not pass her urine without screaming ; yet she kept this fact from us for two or three days. At last I found that she had not during one whole day passed her water at all, from the excessive pain. I explained to her the necessity of discharging it by mechanical means, and after considerable struggle on her part, succeeded in doing so. This did no good, and the pain increased, continuing for three days, making a full week of suffering. The pain was located along the line of the ilium over the ureter of the left side, in a spot which a dime would cover. This pain was so severe, that she would not make an effort to pass her urine. We removed all this pain in about two and a half hours, by the moderate use of chloric ether. After weeks of suffering she recovered almost entirely, until one day she uttered a loud scream, and died in an instant.

" With regard to the use of ether in Bell's disease, I have tried it, and it did not succeed as well in Dr. Tyler's experience."

Dr. Athon said : " I have no experience with ether, but I have frequently used chloroform in operations in surgery, and I have never seen any bad effects attending its administration. I have given it frequently in paroxysmal attacks of insanity, but I am always careful to examine the condition of the heart,—whether it is diseased or not. I do not know why, though I have seen death from its use, attributed to the existence of such disease. I have frequently used it in hysteria, and gave it after the manner described by Dr. Hills."

Dr. Melihenny said : " For the past two years, I have used both chloroform and ether, but principally the former. I must say with reference to both, that I am very much like the child with the bear ; I am a little afraid to come in contact with them when used as freely and indiscriminately as some gentlemen say they have used both. I prefer chloroform of the two, because I deem it more sedative in

its effects, and it is easier to put patients under the influence of chloroform than ether. I cannot say that in all cases it has been attended with a good result, for in some instances they have been more excited after its use than before. I suppose, like all remedial agents, it has its injurious exceptions."

Dr. Mount said: "I have no experience in the use of ether; have used chloroform in two cases, and I think with benefit. I think we might secure quiet in many cases without it."

Dr. Van Deusen asked Dr. McIlhenny how long the patients were kept under the influence of these anæsthetics.

Dr. McIlhenny stated that they were generally under its influence two or three hours.

Dr. Van Deusen thought this was a longer time than there was need for.

Dr. Choate said: "A case occurs to me at this moment, which illustrates the safety of *repeated* full doses of ether, administered by inhalation. A clergyman was admitted into our institution, suffering under acute mania. He had been exceedingly violent at times for a week before admission, having paroxysms of fury, in which it required several strong men to hold him. His friends had been obliged to confine him closely with irons. A few nights before he came to the Hospital, he escaped from his friends, and ran without clothes, on a winter's night, about twelve miles, falling repeatedly, and bruising himself badly. At length seeing a light in a cottage, he sprang through the window, and falling into the hands of friends, was taken care of. During the first three days after admission, he was subject to paroxysms as often as once in two or three hours, continuing from half to three quarters of an hour at a time. As these continued through the night as well as the day, he nearly wore out our attendants. After each attack his debility was extreme, until on the third day I had great fear of his dying. I found him after the subsidence of one of the paroxysms, pulseless, with a sunken countenance, a cold, clammy skin, and every indication of the most extreme prostration. He revived somewhat under the free administration of stimulants, but I felt confident that he could not survive

another attack of violence. As soon therefore as symptoms of a returning paroxysm appeared, I placed him at once under the influence of chloric ether. He slept quietly about four hours, with an evident improvement in the pulse, state of the skin, &c. Then, awaking, he was soon threatened with the same symptoms of renewed excitement, which as before were averted by a repetition of the remedy. During the next four days, I gave him ether about twenty-five times, each time getting him fully under its influence, and at the same time supporting his strength by the free administration of beef tea and stimulants through a tube. The periods of sleep and quiet gradually increased, and after four days he had no return of violence. Within two or three weeks he returned to his friends entirely restored, and is now preaching. We use always the chloric ether, believing it safer than chloroform, and less irritating and offensive than sulphuric ether."

Dr. Fremont said: "I have used both chloroform and ether pretty extensively in surgical operations, and have never had an accident; but on the contrary have derived the most gratifying results. I have seen extremely small doses of chloroform produce astonishing results, and then again very large doses produce hardly any effect. Thirty drops were administered to a lady to have a tooth extracted, and the operation was attended with no pain whatever. I infer from this that chloroform has not the same effect upon all individuals. Have never seen it used in cases of insanity. I prefer chloroform to ether from the fact that its action is almost immediate."

Dr. Morrin was inclined to concur with Dr. Hills. He thought that the effects depended a great deal upon the quality of the article used.

Dr. Green said that he had used chloroform and ether both, internally, with very good results. He had never administered them by inhalation.

Dr. Workman thought chloroform was more sinned against than sinning. He said that as to many other potent medicines, the results of their use were sometimes unfortunate, but we must be prepared to meet them. "The Spartans, you know," said he, "taught

its effects, and it is easier to put patients under the influence of chloroform than ether. I cannot say that in all cases it has been attended with a good result, for in some instances they have been more excited after its use than before. I suppose, like all remedial agents, it has its injurious exceptions."

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Dr. Workman thought chloroform was more sinned against than sinning. He said that as to many other potent medicines, the results of their use were sometimes unfortunate, but we must be prepared to meet them. "The Spartans, you know," said he, "taught

their children not to fear stealing, but the being detected in it. That is the case with us. We do not tremble because we sometimes kill, but lest we should be detected in the naughty act. Perhaps it is fortunate for a physician who kills his patient early in the use of potent remedies, inasmuch as he is so much the sooner put upon the alert." He referred to a case occurring in the practice of a gentleman of Toronto, which resulted fatally. That physician, he thought, would probably eschew the remedy for life; and yet he might go on with it all the rest of his life without any disastrous results. In conclusion he stated, that he had not used it in insanity by inhalation, but as a stimulant, internally, in a few cases of spasmodic disorder, and with satisfactory results. He thought that those who most extensively employed any remedy were best qualified to describe its merits, but on the other hand it was often found that those who used it to a very limited extent found fault with its results. What fair pretensions to just criticism can the latter be allowed to have? Such was his own position, therefore he declined the task of laudation or censure.

Dr. Tyler stated that he was very much gratified with the discussion that had followed the reading of his paper. In referring to the fact noticed by Dr. McLhenny, the period of excitement that followed its use, he said it was common enough in the first stages of its administration, but his experience was, that this excitement will be merged into a peaceful somnolence if the etherization only be carried far enough. He preferred ether, on account of the number of accidents that have followed the administration of chloroform. On the first introduction of chloroform in this country he had inhaled some himself, and suffered severely from it, with all the symptoms of congestive affection of the brain, which had prejudiced him somewhat against it.

The Association then, on motion of Dr. Van Deusen, adjourned until Wednesday morning, at 9 A. M.

WEDNESDAY MORNING.

The meeting was called to order this morning at the appointed time by the President, and after the reading and approval of the

minutes of the previous meeting, the Secretary read a letter from Dr. Cutter, expressing his regret in not being able to attend the meeting.

Dr. Tyler then made some eulogistic remarks in reference to Dr. Chauncey Booth, who had deceased since the last meeting of the Association. Having suffered for some time previous with phthisis, his symptoms were aggravated and complicated during the last year; and while they gave him no great amount of suffering, still they annoyed him much in attending to his daily duties, which he performed till near the close of life. He had no fear of death, for his anchor was cast within the veil. He met the monster without any fear, without any disturbance of mind,—

"Like one who wraps the drapery of his couch
About him, and lies down to pleasant dreams."

Dr. Ray, in reference to the same, then said: "It is a pleasing and profitable duty to pay our tribute of esteem to the memory of those who have signally honored themselves, and their profession. Dr. Booth was one of this class, and few are more competent to bear testimony to his excellence than I am, by means of seventeen years of intimate acquaintance. In the spring of 1841, he was appointed by the Governor to the temporary charge of the Insane Hospital at Augusta, Maine, of which he had been the assistant physician. On my own appointment to the place a few months afterwards, I had every reason to be satisfied with his management, which even then bore marks of that executive talent for which he was particularly distinguished. Two years afterwards he was selected by my friend, Dr. Bell, for the place of assistant physician in the McLean Asylum, which he held until 1857, when he succeeded Dr. Bell as Superintendent. These were the few events of his life; but seldom does a man depart, of whom it could be more fitly said, 'Well done, good and faithful servant!' Although not particularly fond of intellectual pursuits, yet he possessed a clearness of perception, and an unerring sagacity not always evinced by men of more brilliant intellect. The only report he ever made showed, that, although he had written but little, it was not from a want of the requisite material. But it was

in his rare executive talent—the talent for administering the practical affairs of an establishment for the insane—that his strength chiefly laid. No detail of the service, however small, escaped his observation. Deficiencies and irregularities were promptly detected and corrected. The merits and demerits of his subordinates, their strong and their weak points, the exact measure of their capacity and fitness, were readily discerned, and censure was administered so as to give the least possible degree of offence. In short, nobody more correctly estimated the requirements of such service, and no man knew better how to get them fulfilled. His excellence in this department of his duty proceeded chiefly from his knowledge of character. It was remarkable that one who had so little miscellaneous acquaintance with the world could discern so readily and accurately the springs of conduct, the ruling passion, peculiarities of manner, and modes of thinking. This trait gave him an immense advantage, in his intercourse with the insane, over others less happily endowed. He seldom failed to discover, through all the obliquities of disease, some normal opinion or sentiment which might be profitably addressed, in the process of restoration. His manner towards the insane was peculiarly calculated to win their confidence and regard. His frank and ingenuous mode of address put them at ease. He listened to their tedious narratives with unaffected interest, promptly fulfilled his promises, and thus impressed them with the conviction that they had found in him a friend and protector. Among his mental qualities was a strong sense of the humorous, especially manifested in the association of grotesque images. This quality he used with the happiest effect in dealing with his patients. Many a fit of ill-humor, many an explosion of wrath, many a strain of repining was arrested or abbreviated by some sally of his peculiar humor. But it was the moral character of Dr. Booth on which his friends will most delight to dwell. A man farther beyond the reach of unworthy motives it would be difficult to find. He never betrayed a trust, and never allowed any selfish consideration to abate one jot or tittle the rightful claims of duty. Of every thing in the least degree like duplicity or shuffling, he was as innocent as the youngest child. On the Sunday

after his death, his minister, who knew him well, and who has since joined him in the world of spirits, preached particularly in reference to him from the text; 'The Lord said unto me, What seest thou? and I said, A plumb-line.' And surely, if there ever lived a man whose rectitude could be likened to that of a plumb-line, it was Dr. Booth. He was patient of labor, never sparing himself, even when suffering with an amount of bodily ailment which would have reduced most men to complete rest. His manners were of the kind which inspire confidence, and put the stranger at ease; simple, easy and frank, and utterly devoid of parade or affectation. With qualities like these he was eminently fitted for the post at which he died. To those engaged in the same service, his character and career furnish many a useful lesson, and God grant, that when we come to our final account, we have as little to regret as our departed friend."

Dr. Jarvis stated that he had known Dr. Booth since 1843, familiarly. He had found him uniformly kind, affectionate, honest, reliable; and he had lost a friend who could not be easily replaced.

Dr. Rockwell stated that he had known the deceased for many years, and he could bear ample testimony to all that had been said in reference to him.

On motion of Dr. Harlow, the Secretary was instructed to form the remarks into some convenient resolutions, the same to be sent to the widow of the deceased.

Dr. Tyler then offered the following, which was adopted:

"*Resolved*, That the death of Dr. CHAUNCEY BOOTH is felt to be an irreparable loss to this Association, and that we offer to his family our sincere sympathy and condolence in this our mutual bereavement."

On motion of Dr. Choate, the following gentlemen were appointed a Committee to draw up resolutions: Drs. McFarland, Choate and Green.

Dr. Rockwell then read an interesting paper, of which the following is an abstract, "On the General Characters of Epilepsy connected with Insanity."

He introduced the subject for the purpose of learning the views of

the Association on this difficult disease. He mentioned the usual premonitory symptoms, only a part of which attend any individual case. During the seizure, the consciousness and sensibility are suspended, the voluntary muscles are convulsed, and coma accompanies and follows the paroxysm. In severe cases, the consciousness is so entirely suspended, that no sensation is produced by the most powerful applications. After a certain time, the symptoms gradually disappear, and the patient returns to his natural state.

Epileptics are sometimes seized with a fierce and maniacal fury after these paroxysms, which makes them extremely dangerous. At these times they often manifest a murderous propensity, which is truly horrible.

By the constant repetition of the paroxysms in ordinary seizures, there is a gradual tendency to dementia. According to Esquirol, this dementia is more often connected with the attacks of vertigo, than the full epileptic seizures. He says they have a more energetic action. They may last only a few seconds, or they may continue several hours. The length of the intervals between the attacks is also very variable. The seizures may occur several times in a day, or they may not return for months or even for years. Some have supposed they sometimes returned at certain phases of the moon. Esquirol, who had great opportunities for witnessing this disease, says that he has never observed that the attacks were more frequent at any one phase of the moon than at another.

Some persons are seized with the paroxysms during the day, others only during the night, and others both night and day. Sometimes those who are seized at night, have them much oftener than is suspected.

Persons of a susceptible temperament are more liable to this disease than others. Hence women and children are more frequently attacked. Blows or falls on the head, excesses in eating and drinking, enfeebled and scrofulous constitutions, and indulging in violent passions, predispose to this disease.

This disease, though strongly resembling some others, may easily be distinguished from them. It may be distinguished from hysteria,

by the absence of the *globus hystericus* ; and the countenance is not so distorted. The history of the disease in the intervals, will also assist in forming the diagnosis. Besides, in hysteria the consciousness and sensibility are not so affected, and the attack is not followed by coma and fatigue.

Apoplexy differs from epilepsy by the stertorous breathing, and by the pulse being less affected. The history of the case, and the almost entire absence of the convulsions, enables us to distinguish between the two diseases.

In children, when the disease is owing to disorders of the digestive organs, it is frequently cured ; but in adult persons, and especially when the case is complicated with insanity, a radical and permanent cure rarely takes place.

The physician is frequently called suddenly to cases of this disease. The first indication is to see that fresh air have free access to the face, and that every thing tight about the neck and chest be removed or loosened. The head and shoulders should also be elevated. When there is unnatural heat of the head, cold affusions may be serviceable, but should the head become cool, they should be discontinued. If the extremities are cool, warmth or fomentations may be applied. Great care should be taken that the patient do not turn on his face during the paroxysms, especially if the seizure be in the night.

In sympathetic epilepsy the great indication is to remove the disorder on which the epilepsy depends. Sometimes the frequent repetition of the paroxysms will so predispose the system, that there will be a return of the paroxysm after the disease which occasioned it is removed.

There are a few cases in which surgical operations may be deemed proper. For instance, trephining the cranium when the injury and disease of the bone is well marked and circumscribed.

Persons subject to this disease should guard with great caution against the excitement of the passions, and their friends should also endeavor to keep the patient as quiet and cheerful as possible.

Of all the means to cure and prevent this disorder, perhaps the proper regulation of the diet is of the greatest importance. The

food should be nutritious and easy of digestion ; too great a quantity should not be taken at any one time. Moderate exercise in the open air will be beneficial. The patient should have regular sleep at night. Sometimes traveling and change of scene will be of service, by improving the general health and diverting the mind.

The treatment in general should be such as will tend to promote the general health, and restore every part of the system which may be diseased to its healthy functions.

The reading of this paper called forth a very interesting discussion, which was commenced by Dr. Choate, who said that he was in the habit of looking upon epilepsy connected with insanity as affording no hope for successful treatment. Whenever a large variety of remedies were vaunted as certain cures for any disease, it might be taken for granted that there was *no* cure. This was eminently the case in the disease under consideration. He thought that quiet, and a proper regulation of the diet, were about all the means we could use to *mitigate* the disease. He had tried the acid treatment in two chronic cases occurring in young people ; one aged fifteen, and the other eighteen. They had been long subject to epilepsy, and their mental powers were more or less impaired. He had used in these cases an acid bath, containing half an ounce of the nitro-muriatic acid to a gallon of water, causing them to remain in it half an hour daily. At the same time ten or twelve drops were administered internally twice a day. In one of these cases there was an immediate and decided improvement. The boy, who had had very frequent attacks for years, rarely passing two days without them, soon had intervals of from one to two weeks. His general health and intelligence improved considerably, and he gained much in flesh and strength. In the other case no marked effect was noticed. It had occurred to him whether the improvement which followed this and other modes of treatment in some cases of epilepsy, should not be attributed to the fact, that the patients received greater attention, and were watched more closely, in consequence of being under treatment ; were kept more quiet, and their diet more strictly regulated ?

Dr. Green looked upon the treatment of epilepsy as an "*opprobri-*

um medicorum." He had had a good deal of trouble, within the last twelve years, with epileptic patients, and during that period he had not seen three insane epileptics that were restored. He had tried almost every system of medication, but with unsatisfactory results. He thought however that some benefit was derived from the use of the valerianate of zinc, along with the acid treatment. Had seen no cases recover by the acid treatment, but they were almost always alleviated. The three cases referred to, were of less than a year's standing, and each was retained in the institution during the whole of one year after the fits had ceased to recur. They were still all doing well. He had seen in general practice recoveries in half a dozen cases. They were caused either by indulgence in a fit of violent passion, or intoxication in individuals who had been unaccustomed to drink. He referred to one case, resulting from the indulgence of passion, which was so violent that it required six strong men to hold the patient. In another instance, he was called up one morning to see a young girl, who had been brought from the country for purposes of prostitution. She had taken a great amount of liquor for the first time, and as the result, went into violent convulsions. In both these cases he used the cold douche to the head, until the convulsions ceased. This was followed by the administration of purgative medicines.

Dr. Workman said : " I have tried the usual remedies, and with very similar results. Like all the rest of our body, when I got hold of one remedy I used it until I was tired. Attaching great importance to the state of the digestive apparatus, I used purgatives pretty freely, until I found out the evils resulting from the irritation, when I entered my protest against them. I tried the valerianate of zinc, and with the same results that have attended others ; also asafœtida. With each revival of a remedy, we make a new round of experiment, to end in failure. I think these revivals in medicine, are very like those in religion. Popular appetite demands them ; but their permanent good is very trivial."

Dr. Chipley said : " My experience in the Asylum has been most discouraging. I have not within a few years back had a single recent

case. They are old cases mostly, and a large proportion are in the last stages. I have tried every species of treatment, and in some instances I flattered myself that the remedies had some favorable effect. Sometimes the paroxysms would not make their appearance for six or eight months at a time, yet they have recurred invariably. Then there was no plan I could put them on that had any effect that was permanent. When I was a younger man, and in general practice, on several occasions I thought certain plans of treatment had proved effectual with me. In several instances there was no return of the paroxysms for a period of nearly three years, yet they would recur again, and then no plan of treatment seemed to have any effect whatever. I can not say, of the large number that I have treated, that any permanent good has been the result.

"There is a case now in my institution, of an inmate for many years, who was severely affected with epilepsy. The attacks ceased under treatment for a period of twelve or fifteen years, but they are now recurring with considerable severity, and are rapidly exhausting the patient. I have had flattering hopes of various modes of treatment, but cannot say that I have fixed upon any particular one as a favorite."

Dr. Hills said: "In relation to epilepsy in connection with insanity, I have very little information to impart, except perhaps upon one point. In those cases where the epileptic seizures are present through a number of hours, as a means of mitigation I have been in the habit of using chloroform, and I believe it is about the only means I have found useful in checking them."

Dr. Fremont said: "My experience in epilepsy is any thing but cheering. I have seen a vast number of cases, but I can not say that any treatment has served, certainly. I have seen them subside only to recur again." He referred to the case of a man who was seized with a fit whenever he attempted to pull his shirt over his head. They at first recurred frequently, until the person finding the cause of the trouble kept his shirt without a change, during the whole of which time he had no fit whatever. Finally he escaped the attacks by having his shirt slit up the side, and changed side-

wise. In conclusion he referred to the effect of animal magnetism upon epilepsy, which seemed to him to have given the only satisfactory results in adult patients, where no *evident removable cause* could be discovered. He gave the history of a case, amongst others in his practice, where the patient, a young lady about eighteen years of age, had had attacks for several years, which of late had become very frequent—indeed daily, and sometimes two in the day. As soon as complete influence had been obtained over her by animal magnetism, they ceased altogether. On one occasion the operator was requested to come to her, to ward off an apparently impending attack. He was, at the time, suffering from violent neuralgic headache, which seemed to be wholly communicated to the epileptic patient, to the entire relief of the doctor. This young lady seemed to have perfectly recovered; was subsequently married, and has since had several healthy children.

The President, at this stage of the proceedings, read the arrangements of the Business Committee, as follows:

First to visit the Esplanade, next the Marine Hospital, by invitation of Commissioner Sewall, and afterward the Quebec Asylum, and the Falls of Montmorenci.

The time having arrived to act upon the above, on motion of Dr. Tyler, the discussion was laid upon the table; and on motion of Dr. Hills, the meeting adjourned until 8 P. M.

The Association then proceeded to the Esplanade, to witness the field-exercise of the Thirty-ninth Regiment, after which they proceeded, in coaches, to the Marine Hospital, through which they were conducted by Commissioner Sewall. This Hospital was commenced in 1832, and was completed in 1834. The institution is supported by a tax of a penny a ton on all vessels arriving from sea, and a proportion of the tax upon emigration. It is designed for sailors principally. The wards are spacious and well ventilated, and in fact it has all the requirements of a hospital designed for the comfort and proper treatment of the patients. It has accommodations for about six hundred and twenty patients. The exterior of the building is of limestone, and is of the Ionic order of architecture. The

whole premises cover an area of six acres. After being shown through all the wards, and expressing themselves highly satisfied with the arrangement and management of the institution, the members proceeded to the Asylum at Beauport.

The Asylum occupies a beautiful site, commanding a magnificent view of Québec, and the basin of the river. The grounds, which are laid out with most exquisite taste, cover an area of about one hundred and forty acres. The residence of one of the superintendents, Dr. Douglass, stands in front, while the buildings of the Asylum are in the rear. The floors of the Asylum are throughout of plank, laid edgewise. The beds are so constructed, in two parts, that they can slide longitudinally upon each other, by which means they are made when not in use to occupy one half their usual space. The linens and bedding are all made to order, and marked for the Asylum. The kitchen arrangements are most perfect, most of the cooking being done by jets of gas. The water-closet arrangements are exceedingly simple, consisting of a simple, long, wooden trough, through which a large stream of water runs, which at any time can be arrested by a large, wooden plug; the advantage of this over the other more complicated arrangements, consists in its being less liable to get out of order.

After viewing every thing of interest in connection with the Asylum, they wandered through the beautiful grounds of Dr. Douglass, and then sat down in the dining-hall, to a bountiful collation, furnished by the superintendents of the Asylum. At the head of the table, at one end of the hall over the mantel, were festooned the American, English and French flags; while at the table a band of musicians, some six or eight in number, composed of the employees of the institution, favored the guests with some beautiful German airs. At the conclusion, when ample justice had been done to the elegant repast, Dr. Douglass arose and said:

"MR. PRESIDENT, AND GENTLEMEN: I have merely to say, in behalf of my colleagues and myself, that I am very glad to see you. I quite coincide in opinion with Dr. Ray, that these annual re-unions are productive of great good. Thirty years ago had any one predic-

ted a meeting of such men as are here assembled, in such a place, and under such peculiar circumstances, he would been looked upon as visionary, or as a fit candidate for the lunatic asylum. Great changes have taken place since then. Steam, the telegraph, and the rail-car, have made us better acquainted. Our views and ideas were formerly warped, and transmitted through media very much distorted. For the great improvement in the treatment of the insane in this Province, we are mainly indebted to this Association, also for valuable suggestions in regard to the best mode of warming, ventilating, and the general management of institutions for the insane. Whatever may be said of the "right of search" elsewhere, I am free to surrender that right to you now, so far as we are concerned. We accord this right to you with as much freedom as when, on our visits to *your* institutions, you conceded to *us* the right and privilege of visit and search."

Dr. Ray, in behalf of the Association, replied as follows : "GENTLEMEN : We were confident of a welcome reception, because we knew it was impossible to come with stronger claims on your regard. The circumstances under which we meet are somewhat peculiar. Here in this interesting old city, where our fathers once strove together in deadly contest for the mastery of an empire, we have come on a mission of humanity, with no feelings but those of peace and good will. Their object was to do each other harm ; ours, to do each other good. Science, especially the science whose immediate object is the alleviation of human suffering, is no respecter of countries. It knows neither North nor South—neither Celt nor Saxon. It promotes fellow-feeling and mutual respect among men, as no other object can. Nations are no longer strangers and aliens to one another in which the men who are engaged in investigating the laws of nature, and promoting the cause of humanity, are acquainted with each others' pursuits, and meet together for the interchange of ideas, and the knowledge of one another. The kind of feeling thus engendered will do more, I verily believe, to prevent collisions, than any other single agency whatever. In the spirit of these views we have come together in what, to the most of us, is a

strange and foreign land, but where the peculiar nature of our calling, as well as the cordial welcome we have received, make us feel at home."

Both these speeches were much applauded at the conclusion.

The party next proceeded to visit the Natural Steps, and thence to the Rapids. The scenery around was beautifully wild and picturesque, and the company were unanimous in their expressions of pleasure and astonishment.

Next in order was a visit to the famous Falls of Montmorenci. The waters have a fall of nearly 80 yards; the breadth of the stream at the brink being about 25 yards. The velocity of the descent is greatly increased by a gradual declivity for some distance above. From this spot a beautiful view of the city of Quebec presents itself, and quite an extensive view of the River St. Lawrence. The members tarried here for a long time, enjoying one of the sublimest sights in the Provinces, and then betaking themselves to the carriages, enjoyed a delightful evening-ride to the hotel.

So few of the members were present at the appointed time for meeting, that an adjournment was agreed upon until 9 o'clock of the following morning.

THURSDAY MORNING.

The Association being called to order by the President, the minutes of the previous meeting were read and approved. The discussion of Dr. Rockwell's paper on epilepsy was resumed.

Dr. Harlow said: "The subject of epilepsy is an interesting one, and one in which we have had considerable experience. It is connected with a class of cases that are most troublesome to manage or relieve, and most unfortunate in their results. So far as my experience goes, I have never found any thing that would do more than alleviate the disease for a time. The various new remedies which are daily springing up for its cure, seem to relieve only temporarily. Their principal effect seems to be, to inspire new hope of recovery in the minds of patients, and thereby ward off attacks. We have tried the acid treatment, but not with any satisfactory results."

Dr. McFarland thanked Dr. Rockwell for his interesting paper, and thought that he deserved praise for thus bringing the paper before the Association. He knew that it was customary to dodge the question, the same as we dodge the patients. He believed that it was a subject that ought to be attended to. He was somewhat surprised that during the whole discussion no allusion was made to the class of cases known as epileptiform attacks—cases where every thing but the fit is wanted to decide positively that epilepsy exists. These symptoms almost always precede the true epileptic seizure.

He stated that epilepsy was a disease of antiquity, in connection with which remark he referred to the great painting of the Transfiguration by Raphael, in which he saw the true epileptic countenance in the face of the demoniac boy. So striking did he think the resemblance to be, that he thought the artist must have studied that peculiar countenance of epileptics.

Dr. Tyler referred to the case of a young man, a New Englander, who went West, and suffered from miasmatic fever. He would have an attack of epilepsy on the average every three weeks. Quinine was administered, which checked the fever, and cured the epilepsy.

Dr. Williamson said that he had tried zinc and acid, but neither had with him been productive of any good.

Dr. Ranney said: "During the last twelve years our number of epileptics has been probably about twenty-five. Besides the ordinary modes of treatment, I have adopted those recommended by several of our recent writers upon epilepsy. Five or six years ago I attempted to carry out the course recommended by Solly, who advises the administration of digitalis in large doses. This treatment I continued for some months. The results seemed rather favorable, the paroxysms were of less frequent occurrence, but no permanent cures followed. The principal thing of which I became satisfied, was the fact that digitalis did not possess the cumulative property so frequently ascribed to it. In several instances I tried the mode of treatment recommended by Dr. Horace Green, the application of the nitrate of silver to the throat; but no permanent good result followed. While Dr. Marshall Hall was in this country, he passed one day in examin-

ing our epileptics. He recommended the use of alkalies, which I have tried, and also advised that the patient lie at an angle of forty-five degrees, which I could not well carry out. Within the last three or four years I have adopted the course recommended by Radcliffe, who advises the use of tonics, quinine, &c., and also that of M. Herpin, a French writer, who prescribed the sulphuret of zinc in doses of from five to fifteen grains, daily. I have not seen a case in which recovery was complete, although in many instances the medicines have acted favorably for a time."

Dr. Athol said: "My opportunities for the treatment of epilepsy, followed by insanity, have been very limited. Our law, or rather, our custom is to refuse all epileptic cases. The law in our State considers that epileptic insanity, or insanity following epilepsy, is incurable, and designates the cases that we shall receive. Our institution is a hospital for the cure of insanity, and not an asylum. Consequently I have had little opportunity of treating such cases. However, we have patients sent to us sometimes who are laboring under epilepsy, and it is not known to those who make the inquests. I have had considerable experience in the treatment of epilepsy in general practice, and I must say that I never found an epileptic who did not exhibit some symptoms of insanity, either before or subsequent to the attack. I am sure I have not seen one without illusions or hallucination. Many of them have the delusions mentioned by Dr. Rockwell. I am sure that Napoleon, who was said to have been an epileptic, had illusions of this kind. He always supposed that he had a star which guided his destiny.

"In the treatment of these cases that I have had in the institution, I do not know as I have used a better remedy than chloroform. For a time this seems to mitigate the violence of the disease. I have tried the nitrate, and oxide of silver,—and I do not know as they did any good. I look upon insanity connected with epilepsy, as incurable; and do not think we have succeeded in any thing but in relieving it temporarily. Before these cases have been long in the Hospital, the Commissioners issue an order for their discharge. I find that the stimulating purgatives, about the time that we anticipate the parox-

ysms, are among the best of our remedies in mitigating the paroxysms at the time. At the last session, I referred to a case of epilepsy which was peculiar in the respect that whenever the patient masturbated, an attack followed. By the use of the douche and camphor, I was enabled to relieve him, and he eventually got well."

Dr. Ray said: "Between epileptiform attacks and unequivocal epilepsy, I doubt whether there is any ground of distinction as to their pathological condition; and in fact most writers on the disease are inclined to consider the epileptiform attack as serious and as fatal in its results as the more severe form. Indeed, they run into each other in different cases, and in different stages of the same case. You may have a case of epileptiform disease ending in epilepsy, or epilepsy ending in epileptiform disease.

"In relation to the hereditary character of the disease which has been alluded to, I think there can be no question that in a very large proportion of cases, that it is a well established fact, that hereditary predisposition exists; still, this is not necessary, any more than in insanity."

Dr. Curwen said: "All our cases are chronic, and connected with insanity. I have done nothing more than palliate. Our usual practice is to carefully regulate the diet, and keep the system in a correct state. By these means the violent paroxysms are alleviated. I have not tried any of the remedies that have been referred to, for the simple reason that I did not think I had a case where the administration of them would be attended with any good result."

Dr. Curwen also stated that he wished to call the attention of the Association to a new remedy for masturbation. He had treated a large number of such cases, and though he derived much benefit from the combination of conium, iron, and lupuline, yet by the addition of dulcamara in extract, the result was much more satisfactory. His attention had been called to it by the fact, that where it had been used in certain diseases of the skin, the patients complained that a complete loss of virile power was the result of its continual use. He had continued the use of this medicine for six or nine months at a time, and in some cases as long as two years, and found a very

decided benefit resulting. It had removed the habit entirely ; that is so far as any observation could be brought to bear in regard to it. At all events the improvement was very great. He could call to mind a great many gratifying cases, and in this connection referred to that of a boy who was extremely addicted to the habit, had the unpleasant symptom of livid extremities, and in fact it was the worst he ever had in the house. This one was put upon the above treatment for fifteen or eighteen months, and improved rapidly ; became active, and his mind showed signs of restoration—a point which he never expected to reach by any treatment.

Dr. Bemis said : “Epileptics I regard as the most troublesome class of patients admitted to an asylum. When admitted they are generally very much worn out. They are usually kept in the family until there is no hope for them, when they are removed to an asylum to relieve the friends of a burden. I suppose at our institution every thing has been tried. Previously to my connection with it, which has been for ten years, I know by a reference to records that every thing had been done that any writer had spoken of. I believe that not a few cases had subsided, but were not discharged as recovered. There had been three or four cases in which a milder form of epilepsy existed, of patients who had apparently recovered, though they were not discharged as cured. In these cases there was no disturbance of the mental phenomena.

“The great portion of all our cases have been those poor demented people who have been epileptic from the commencement of puberty, and have been kept in their families until they have become like helpless idiots. When we have twenty-five or thirty of such patients in a hospital, it is worth while to try to relieve them. We have no separate ward for them, and they are classed somewhat according to the condition of their families.

“We at one time commenced the administration of nitro-muriatic acid internally. We had one patient who had been epileptic from the commencement of puberty, had been to Groton, and other places, and was said to have been cured at each and all of these ; but her mind was gradually sinking, and she was becoming slowly dement-

ed. At each attack there were manifestations of a good deal of violence and mania. These were gaining upon the patient until she was twenty-six years of age, when she was sent to the Asylum. The record of her case by Dr. Lee showed her to be to all intents and purposes an idiot, and that she was addicted to masturbation. She was unable to sew, do any duties about the house, was unable to sit down, or even to keep her bed. Her case was at once pronounced to be a hopeless one. Every attack was more and more severe, and for the last two or three years previous to her admission she had been in this hopeless state of idiocy. She was put upon the nitro-muriatic acid treatment, with a proper attention to regimen, and from this condition she improved in general health; her fits occurred less often, and after some slight attacks she had no fits for some four or five months, and from this hopeless state she was enabled to be of some use in the ward. She mended clothes, habits of daily industry recurred to her, and she was enabled in a measure to enjoy the pleasures of life. This patient died of pulmonary disease, without having another attack. We kept her until she died.

"A patient who had been subject to epilepsy as long as the one before mentioned, was sent into the Asylum last April. He had had epilepsy since puberty. He was, on admission, thirty years old. He was enabled to occupy a place in a store until some time previous to admission, when his attacks became so frequent that he was unable to attend to business. He was placed upon the acid treatment. This patient was very abusive in the lucid intervals. He would have one attack for a week or nine days together, being most of the time unconscious. While in this unconscious state he was exceedingly active, and had paroxysms of extreme violence. He would at times make his escape from his room through the ventilating space. It is now fifty-seven weeks since he has been upon the nitro-muriatic acid treatment, and he has had no attack whatever, night or day, and is gradually improving all the time. He is now able to make himself generally useful about the wards.

"In connection with the acid treatment, I have paid particular attention to the digestive organs. I have noticed that attacks are

more frequent on Monday than any other day, in consequence of partaking freely of the New England dish of baked beans, the day before."

In answer to a question from Dr. McIlhenny, Dr. Bemis said that the baths were used daily, until they produced some sensible effect upon the skin, when they were omitted for three or four days until an epileptic attack was feared. In some cases large pustular eruptions on various parts of the body resulted, when the baths were dispensed with until they were healed. He then continued :

"It does not seem strange that such effects are produced when we take into consideration the amount of substance acted upon,—thirty feet of intestine, and the whole surface of the skin. What led us to adopt this treatment, was the report made of some cases in *Braithwaite's Retrospect*, by Mr. Hunt. In his cases there was no connection with insanity. Our cases have been fully as striking in their results as were his. When I first heard of this treatment I thought it would not be attended with any benefit, but I decided to try it upon some recent case. None of these presenting themselves, I placed some half-dozen old cases upon that treatment, and the result you have heard. I believe that the theory of Mr. Hunt is that epilepsy is caused by a *materies morbi*, which in its nature is alkaline. Hence the indications for acids. With epilepsy unconnected with insanity we have very little to do. I know of two or three recent cases not under my treatment, but of whose character I know something. These are unconnected with insanity. One is that of a boy fifteen or sixteen years of age, who had, for a year or more, attacks once a month, until last September. This boy is treated wholly by purgatives, is able to hold his place, and is fast recovering."

In this connection, Dr. B. referred to a patient who had a peculiarity in the aura of epilepsy. He experienced a sensation of cold air rushing up his rectum, to the distance of five or six inches. This, at each seizure, was treated successfully by the introduction of a speculum, through which cauterization was applied to the point reached by the aura. The patient was recovering.

In conclusion, he stated that he had no faith in the permanent cure of epilepsy. He thought patients might be free from the attacks for years, yet sooner or later the attacks would recur with more frequency and severity, until they were left poor, miserable, demented beings. He regarded the nitro-muriatic acid treatment, with a proper attention to the diet, as a means of palliation little short of a cure. At all events, by this treatment the patient was rendered more comfortable, the patients around him were better satisfied, and upon the whole a great point was gained.

Dr. Bemis said: "I have in my mind now, the case of a young man who used to be my playmate, and since his fifteenth or sixteenth year has been afflicted with slight epileptic seizures. These grew upon him, showing pretty plainly that he was becoming gradually demented, until he was twenty-two or twenty-three years old, when he married a very intelligent young lady, and since that time I have not heard of his suffering from any more fits. His wife has been dead a year or more, but what will be the ultimate result I am unable to conjecture. In this case there was no general treatment for epilepsy. His marriage was regarded by his friends as a very unwise step."

Dr. Workman said: "I have listened to the discussion with very great interest, and think I have derived a good deal of instruction from it. My cases have been very much like those detailed by Dr. Bemis; that is to say, I have cured them all to death. Some have apparently recovered, and gone home, but only to return again. Not long ago, I admitted a patient whose certificate did not say that he had epilepsy. Before the next morning I discovered the characteristic marks of old tumor of the ear, and he had an epileptic attack. I asked him, 'Were you ever in an insane asylum before?' 'Yes sir, fifteen years ago, in Dublin.' I dare say this man's recovery was considered as a case of epilepsy cured. I do not however flatter myself that I shall witness a repetition of the happy result."

"I have made several *post-mortems* of epileptics who have died in my time. The majority die in the night. In one case, a patient was heard to give a violent scream, but before the night-watch could

get to him, he laid over on his face and died. In all the cases, the stomach was found very much overloaded. I recollect one case of a French boy, who had been out working at raising turnips, and had eaten very heartily. At the autopsy, the residue of three undigested meals was found in his stomach. He was exposed during the day to sharp cold; this probably prevented assimilation, and the two causes operating, he went to bed and had a fit. I think we very rarely have a central, organic cause. I think in almost every instance you will trace the origin of the paroxysm to some nervous reflex influence, and it would be of great importance to seek out these functional disturbances. I have tried the muriatic acid treatment with the same result as in Dr. Bemis' cases. I give purgatives only of the mildest form. The irritation caused by drastic purgatives has a very injurious result upon the epileptic paroxysms."

He remarked that Dr. Bemis had noted the bad effects of pork and beans. He had himself noticed that the eating of English plum-pudding by some of the patients on holidays, was followed by an attack of epilepsy. He was forcibly struck with the case mentioned by Dr. Fremont, of a man, who had an attack every time he attempted to take off his shirt. He thought it was due in that case, to reflex nervous action, and that nine-tenths of all the cases resulted from this source. He had been accustomed to ascribe many of the cases to a gross indulgence in masturbation. Certainly it would be found that a majority of asylum-epileptics were addicted to this practice. He had frequently met with epileptics who screamed. Some gave a single scream, and others a series of them, much like a locomotive-alarm. He referred to the case of one man, who had a frontal depression, who would utter a dozen screams in succession, and then jump up three or four feet. This man was grossly addicted to masturbation, and was sometimes very dangerous.

Dr. Rockwell said: "In cases of epilepsy connected with insanity, I must confess my success has been very small. I must at the same time say, that very much can be done to mitigate these cases. I have tried many, in fact, almost all the modes of treatment that have been mentioned here, and with very nearly the same

success. In regard to the acid treatment, I have not pursued it to the same extent as the other physicians, but have found it beneficial in those cases where coolness of the extremities existed, by bathing them with it, thereby producing warmth, and equalizing the circulation. Nitrate of silver tends to allay the irritation, and prevent the paroxysms for a time, to such an extent sometimes that we almost flatter ourselves that a permanent cure is the result.

"Some cases are christened epilepsy, which in reality are nothing more than hysteria. In these cases we seldom fail of a good result. I have seen some very beneficial results from the use of the spirits of turpentine. This is very unpleasant to take. I have succeeded better with balsam of fir. I have seen considerable benefit from the external use of spirits of turpentine to the spine. In regard to the use of drastic purgatives, I am very much of the opinion of Dr. Workman. I know in epilepsy there is frequently a tendency to constipation of the bowels, in which cases laxatives are indicated. In these cases I am always careful that there shall be a movement of the bowels every day. For this purpose the milder the laxative the better, if it produce the effect.

"I consider irregular hours for meals and sleep very injurious to epileptics. Their food should be nutritious and easy to digest, and the quantity should be measured out to them. A great deal depends upon the regimen in these cases. When the epilepsy is sympathetic of some other disease, we must remove the source of irritation, if we hope for any alleviation of the epilepsy. Regular sleep is very important.

"In relation to the epileptic aura, I would state that since I commenced writing upon the subject of epilepsy, I have enquired of patients concerning it. I went to the epileptic patients in the asylum, and asked all those who had minds sufficient to give a correct statement, and could not find one who had experienced that sensation. It undoubtedly exists in some cases. Many of the patients are so demented, that they are not able to give any reliable account of themselves."

In relation to a case cited by Dr. Workman, Dr. Rockwell refer-

red to one where masturbation was the cause of the epilepsy. The patient was taken when sixteen or seventeen years of age. Great pains were taken for his recovery ; he was sent to Europe and elsewhere,—but the epilepsy increased, and the paroxysms were accompanied by furious mania. He was married during one of his lucid intervals, and for several years had no recurrence of the paroxysms. His wife sickened and died ; a few weeks after which his epilepsy returned, and had continued.

In the treatment of epilepsy he thought that every thing like irritation should be removed from the patients. The attendants should be persons of mild and kind dispositions, otherwise almost every treatment would be unavailable. Dr. Radcliff's treatment, as spoken of by Dr. Ranney, would perhaps be very beneficial, in those broken-down constitutions that require support.

Dr. Jarvis thought that a perfect cure or suspension of epilepsy was only effected by a rigid enforcement of those dietetic and other rules which were laid down in the treatment. He said it was like walking on a rope ; so long as the equilibrium was maintained it was safe. He referred to the case of a medical friend, formerly subject to epilepsy, who for six or seven years had been living very abstemiously, which was his way of effectually warding off an attack. After such a long while, thinking that there was no danger to be apprehended from another attack, he indulged very slightly at a party, and was soon after seized with a paroxysm. He had had several since, and was now frequently subject to them. Both he and his physicians, and also his friends, attributed the renewal of the malady to this single dietetic error.

Dr. Ray stated that he would add his testimony to that of several others, touching the importance of a strict attention to diet. " This is a subject," said he, " of an importance far greater than we are apt to suppose, from the little attention bestowed upon it by writers upon the disease. It is true, attention is always directed to the regulation of the diet, but there is something more required of the physician. Every article of diet should be rigidly prescribed. My experience of epilepsy (unconnected with insanity) goes to show, that in nineteen

out of twenty young persons, it had a digestive origin. "Whatever treatment you may adopt in these cases," said he, "whether it be with the oxide, or nitrate of silver, or the valerianate of zinc, I can promise you no very good result without this strict attention to diet. When I was in general practice, I was accustomed to prescribe such articles of diet as I knew would not disturb the stomach, and insisted upon their exclusive use. Again and again I have seen fits which were suspended for years by this method, reproduced in all their original severity after a little indulgence at the table, in dough-nuts, mince-pie, cranberry-sauce, or something else equally improper. Now you know our object in the treatment of these cases, is to break up the morbid periodicity, which of course is renewed and confirmed by every fresh fit. It is one of the most discouraging things in the treatment of epilepsy, that just when you congratulate yourself on having checked its progress, and are holding out expectations of recovery, you are liable to see it brought back by some foolhardy transgression of your rules of diet. I think it may be said, for our encouragement, that in children, who are in tolerably good physical health in other respects, and taken in the very early stages of the disease, a strict prescription of diet, as well as medicine, will effect a cure in a large proportion of cases. I know it is very difficult to impress the patients, and their friends, with the importance of this strict attention to the diet, but I am satisfied that nothing short of it will effect much in the cure of epilepsy. Many cases, it is true, will get well of themselves. Nature frequently does more for them than we can do. There is one condition of the mind in epilepsy to which I would direct the attention of the gentlemen. Though of very little importance, therapeutically considered, yet in a juridical point of view it is very much so. We are prepared to find more or less disturbances immediately after the fit, and perhaps for a little time before, but it is a question whether in the middle of a pretty long interval, when the patient is able to be about in an apparently healthy state of mind, we have any right to say that his mind is always perfectly sound and responsible. In a criminal case of homicide, in New York, some two or three years ago, committed by an epileptic in one of his intervals, the

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whole case turned on the question, whether or no the criminal act depended upon some such deranged state of the mind. There is reason to believe that in some cases, where there may be no obvious mental impairment during the interval, the mind may become suddenly possessed by some delusion, or hallucination, or irresistible impulse, liable to lead to criminal acts. There are few points more worthy the attention of the psychologist than the mental condition of epileptics, not unequivocally insane. It would richly repay any amount of attention that should be given it."

Dr. Green referred to a case of a child that was seized with most frightful convulsions, lasting from 4 o'clock till 9 P. M. The only cause for these violent convulsions was found to be the eating heartily of ground peas, which were next morning discharged by an emetic.

Dr. Ray then proceeded to read an elaborate paper on "Mental Hygiene." This paper was listened to with deservedly marked attention from beginning to end; and touching upon points of the utmost importance in that connection, it called forth a very interesting and profitable discussion. He dwelt more particularly on the bad effects of too close intermarriages, and injury to the mental health attendant on a want of a proper amount of rest and sleep, together with some minor points, the substance of which is brought forth in the discussion.

After the reading of this paper, on motion of Dr. McIlhenny the meeting was adjourned to 2 P. M.

THURSDAY AFTERNOON.

According to previous adjournment, the Association was called to order by the President at 2 P. M.

After the reading of the minutes, Dr. Curwen read a letter from Dr. Nichols, tendering his resignation as Secretary of the Association, which, after considerable expression of regret, was accepted. A vote was then taken for Secretary, which resulted in the choice of Dr. Curwen.

Dr. Tyler then moved that a vote of thanks from the Association be offered to Dr. Nichols, for the able and satisfactory manner in which he had discharged his duties as Secretary.

The Committee upon the time and place of the next meeting of the Association, made the following report : That the Association hold its next annual meeting at Lexington, Kentucky, on the third Tuesday in May, 1859. This was finally agreed upon, after much discussion.

Dr. Chipley then rose to express his gratification for the honor conferred upon his native place, and stated that he did not doubt but that every thing would be done to make their visit agreeable and profitable.

Next in order came the discussion of Dr. Ray's paper, on "Mental Hygiene," agreeably to the motion of Dr. Smith.

The discussion was opened by Dr. Workman, who strongly deprecated the system of education as carried on at the present day. He did not think it right to consider a child of four years of age a block-head because he could not speak two or three languages, and study mathematics, as a collegiate. He was forcibly reminded of a remark of Dr. R., of Montreal, in speaking of these prodigies ; that they were "infant philosophers, and became adult fools." He cited the case of a little girl who was worked to death by these means, and whose mother said she died of dysentery ! In conclusion he stated that he did not direct the education of his own children according to the present fashion. If he were called on to legislate on the matter, he would forbid any child being sent to school before the age of seven years ; and he could say from experience in his own family, in which he had tested the rule, that no loss would be sustained from its universal adoption. It was much to be hoped that we were on the eve of a healthy reaction, in this department of human affairs, and no men in society can bear more ample testimony than our specialty to the evil consequences of overdriving the youthful mind, and the disregard of those requirements of the physical economy which the voice of nature continually proclaims.

In connection with intermarriages, he stated that the census of Canada for 1852, showed that the number of insane in the lower Province was much greater than in the upper. A great proportion of the cases termed insanity were certainly idiotic. Was it not

highly probable that close intermarriage for several generations among the French people of Lower Canada, had resulted in the production of idiocy? It had been ordered in the beginning, that a man should "leave his father and mother," when he took a wife. In Canada, we found the men of New England and Scotland almost invariably go back to their native parish for their wives. Need we wonder that insanity is found to be on the increase, when such pains were taken to perpetuate it? He trusted that as several of those now present were bachelors, and Quebec ladies were attractive, they would take the hint.

Dr. Choate said: "I have been much struck with some of the views brought forward in the paper, and particularly with those in relation to causes of disease operating *peculiarly* in the United States. I think the great strife which exists to keep up appearances under straitened circumstances, and the constant struggle which is going on to rise in social condition, are powerful causes in producing insanity in this country, particularly among females of the middle and lower classes. In the old countries the social position of all classes is more fixed. There is less strife and more contentment.

"In relation to the effects of intermarriage among blood relatives, I have been led to have serious doubts. It happens that in the district of the State of Massachusetts which sends patients to the Taunton Hospital, are three or four communities, which have lived for many years by themselves upon the Islands of Nantucket, and Martha's Vineyard, and although they have constantly intermarried, the proportion of insane persons among them has always been small.

"The remarks of the gentlemen, who have spoken upon the subject of intermarriage appear to me to show, that this cause may operate strongly in producing defects in the senses, in speech, in hearing, and in sight, but not particularly in producing insanity. My friend, Dr. Ranney, informs me, that for two or three centuries the royal family of the Sandwich Islands have been in the constant practice of intermarriage, and that yet they excel all other nations of those islands in physical and mental developement. Statistics alone can settle this question, and these we have not sufficiently accumulated."

In answer to a question from Dr. McFarland, Dr. Chipley stated that he had learned from Dr. Bemis, who had collected a great many statistics upon the subject, that insanity was not of very frequent occurrence in connection with intermarriages. The evil rather reached the senses, and we had the blind, and deaf and dumb in almost every family. The marriages were almost always fruitful, and generally one or more of the children were deaf and dumb, blind, or idiots. Such an effect had these facts upon the community, that they were carried to the Legislature, and a bill passed the House, but failed in the Senate, forbidding the marriage of first cousins.

Dr. Morrin stated that in the neighborhood of Quebec, two first cousins married, and the whole of the children were deaf and dumb. He knew where intermarriage of first cousins was practiced in a family, among the aristocracy, nearly the whole of whose members were insane.

Dr. Hills expressed his gratification at hearing such an able paper, and said that he could fully concur in every point that it touched upon. He stated that he had had in his institution three instances of parents and children being insane; had now at least four instances of brothers and sisters being insane, with consanguinity of parents. He might add, in this connection, that he had two instances of husband and wife being insane, but without any blood relation between them. He stated that the county of Guernsey, in his State, sends an unusually large number of insane to the asylum, and it was believed that this was owing to the great extent to which intermarriages took place in that community. He was surprised to hear the doubts expressed, that consanguinity in parents ever caused insanity in the offspring. He had been led to think it a frequent cause. Its non-appearance until in mature years does not disprove a constitutional cause, any more than in hereditary cases. The state of Ohio had sought out the parentage of all cases of insanity, idiocy, deaf-mutism, and blindness, and the facts elicited show clearly this cause in the production of all of them. The report however was very imperfect.

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that about fourteen instances of intermarriage had come under his observation. He had inquired into the condition of the progeny, and found that in nine children there was physical deficiency, one of hearing, one of seeing, one could not talk, two had not the use of their lower extremities, and two in one family were near-sighted.

Dr. Jarvis, expressing himself pleased with the reading of the paper, stated that he felt much gratified to hear such a unanimously favorable opinion from the members. He thought it should be sent to every family, and read by every individual. Very few knew the manifold dangers that affect the mind. The evil influences he thought as numerous as those which act upon the body. He referred to the present system of education, and its deleterious effects upon the mental health, and stated that most falter under the continued strain; some break down, and others become insane. From the finest intellect to the lowest, he considered that no one thought right at all times; that with every one, there were times when the mind was not as clear as it should be. This was attributable, perhaps, to a hearty dinner, overwork, want of a proper amount of sleep, excessive exercise or excitement, or other mismanagement of the physical or mental powers. He wished particularly to call attention to the imperfect education everywhere given, in school and out of school, and continued: "In manifold ways, every one is taught, but taught *last* to know himself; knowledge of the sciences, of external nature, history, philosophy, &c., is freely given, but not that of our own internal nature, of the powers of our body and our mind, their relation to each other, and their mutual influence. Nevertheless, most in the United States have some sort of education to fit them for action in the world. But connected with this, there is a danger to mental health, if not peculiar to this country, at least, greater here than elsewhere. All the employments, all the paths of life are open to whomsoever can and will enter and walk in them. Moreover, no one is confined to the path he may have once selected, but he can at any time change, and take any other more suited to his capacity, his taste, or his ambition.

"Our people generally not only aim higher than those of most

other nations, but they are constantly looking upward, to see if they may not better themselves. And whenever occasion offers, they are prone to leave the more humble, quiet, or less profitable avocations, for those that promise more, or are more flattering to their ambition. Hence we find cultivators of the soil becoming traders, patient mechanics becoming manufacturers, the small trader enlarging his business to that of a wholesale merchant, the working man turning speculator, the capitalist going to the stock exchange, and dealing in matters of doubtful value. Some leave the plough or the workshop, and become scholars, or enter the professions. The quiet workman, or man of business, enters the field of politics, and engages in the anxieties and strifes of parties, or in the management of the affairs of state. Science is popularized and offered, in some form, to every body; and some who have been contented with the learning of the common school, or with reading the common works of history, travels, &c., become interested in subjects of a higher nature. They study the sciences, dip into philosophy, theology, and chemistry. They become physiologists, astronomers, and phrenologists.

“In all these, and manifold other ways, men here assume burdens of thought, study, care and anxiety, such as they had not been trained to bear, and they lay a weight upon their brain, which they have not been accustomed to sustain. They suffer, in their mental part, as the tailor or clerk would, in the physical part, if he were suddenly to leave his sedentary employment, and become a farmer or a stone-layer. They endanger the brain, as certainly as the abstemious dietetic would his stomach, if he were suddenly to take the sailor's hard fare, or the gourmand's luxurious profuseness. It is no wonder then, that some of these find themselves in a wrong position; that some falter in their new work, and stagger beneath their unaccustomed burden; that some are disappointed and heart-broken; and that some waste their mental forces in the vain struggle for success, and a few become insane. This is one of the evils of our present civilization, and it will follow us, until we make another advance, and teach men their own natures; their strength and their weakness, the limit of

their capacity, and their liability to suffer if they overstep the law of health, misappropriate their powers, or assume any burden which their original constitution or their training has not prepared them to sustain. I venture to hope, therefore, that Dr. Ray's paper will be printed, and spread broadcast through the world, to warn men to prepare themselves, by a better education, for the responsibilities of life, and by a better discretion, to apply their powers to such purposes as they were fitted to accomplish."

Referring to the fact stated by Dr. Ray, that one-third of the children die before they are five years old, Dr. J. said, that he had recently made a calculation of the connection of ignorance of mothers with the early mortality of children, in England and Wales, through seventeen years, ending with 1854. In those counties, where 63 per cent. of the women when married were unable to write, there were 749,927 marriages, and 2,853,774 births; 19 per cent. of the children died under one year, and 34.52 per cent. under five years of age. But in other counties, where only 30.77 per cent. of the marrying women were unable to write, there were 804,170 marriages, and 2,933,573 births; and of these children only 15 per cent. died under one year, and 27.79 under five years of age. Thus showing an excess of 26 per cent. under one year, and of 24 per cent. under five, in the more ignorant over the more intelligent counties.

Dr. Harlow stated, that the subject of hereditary insanity was one which had occupied his attention considerably. As far as he could get at the facts, about two-thirds of the patients have had insane relatives. In regard to intermarriages he had not been able to arrive at any satisfactory conclusions. In regard to precocity, he referred to the early age at which students entered our colleges, and said that they were less likely to make their mark in the world than those who entered at a more mature age; that many of our most respectable schools greatly erred in forcing the intellectual advancement of their pupils at such an early age, in order to get them through young; and that although they seemed to run well at first, they often fell in the rear at the end of the race. In other words, they

might be the best fitted for college, yet graduate with the meanest honors.

Dr. Smith thought the valuable paper read by the distinguished President, this morning, should not be passed over in silence. The subject of Mental Hygiene, he believed, had never been brought before the Association, and he regarded it one of superlative importance, and coming peculiarly within the province of our specialty. He thought the Association should feel greatly indebted to Dr. Ray for his paper, not only on account of its intrinsic worth, but from the fact it would prove instrumental in directing attention to a subject fraught with the most important results, and inducing close and discriminating observation and investigation. He hoped we would all have the pleasant privilege of perusing it, with care, in the *JOURNAL OF INSANITY*, and, indeed, would rejoice to see it in every family on the American continent.

Dr. Ray stated that the remarks made upon the subject of intermarriage of relatives, had induced him to make an additional observation upon that subject. Since the writing of that paper, within a few months there had appeared a work in London, by Mr. Buckle, called "*The History of Civilization in England and France*," and it was decidedly one of the leading works of the day. In that work is denied, point blank, the whole doctrine of hereditary influence. Now we had been believing all this time that such an hereditary influence does exist, and we were suddenly called upon to prove it. He imagined that it would be difficult to furnish the proof on the spur of the moment. He was ready to confess that the facts which bore directly upon the subject were not easily got at. And we believed it, he apprehended, rather upon the strength of some general impressions, than of copious and reliable statistics. The same might be said in relation to the injurious effects of intermarriage. He thought the only course was to enrich our statistics, and he hoped that in every hospital for the insane or idiots, inquiry would always be made in relation to the mental condition of the patients' relatives. In that way a great many facts might be ascertained upon this subject. The examples which had been alluded to of

limited communities, such as Nantucket, were of questionable value, and must be very closely scrutinized. Nantucket was isolated, it was true, from the rest of the continent, but it must be borne in mind that a great proportion of its male population die abroad, and consequently the supply of husbands must come from another quarter. Hence the statistics were not of so much value as they would seem to imply. The inquiries made upon the subject had resulted in the establishment of the fact, that the mingling of common blood has led rather to a deterioration of the senses than of the brain. It was well to bear in mind, however, that statistics should always be consulted with reference to the exact object for which they were made. He stated that he would like to draw the attention of those present to another point mentioned in his paper, a little more fully. He saw no cause in operation more calculated to deteriorate the power of endurance, both physical and mental, than our system of education. It was a matter of everybody's observation, and everybody's duty, to set themselves against it. The results of our opposition so far, promised but little, but still he thought it was none the less a duty to persevere.

Dr. Ray continued: "Children are put into school almost as soon as they can go alone, and kept there six hours a day, and as they advance the work increases. If fortunate enough to reach the age of twelve unscathed, then the great physiological evolution takes place, and they have more than they can bear. They go into the high schools, where the sessions are six hours each, not for the sake of study, perhaps; some do not study in school at all, the time being occupied only in recitation. They are kept at their exercises out of school frequently until ten or eleven o'clock at night. I am astonished every little while at some new revelation respecting the extent of these practices. A few weeks ago I found that in one of our high schools, girls who ought to be in bed at nine o'clock, were up habitually till eleven or twelve o'clock, getting up their exercises for the next day. The number of youth that break down in consequence of excessive cerebral activity is countless. The disease may pass under some other name, even dysentery, as in a case that

came to my notice only last week. A lady informed me that a dear and only daughter, fourteen years old, died at school from dysentery, though the disease seemed light, and her physicians declared, only an hour before she died, that there was no danger. It appeared, however, that she was one of those intellectual children who are fond of study, and that she had been encouraged to use her brain to the utmost extent, without any of those exercises and recreations which might, in some degree, have checked the ruinous effect of such a course. In this condition she was attacked by a disease which, under other circumstances, would not have been serious, and she wanted the nervous energy to resist it. This case illustrates an effect of excessive cerebral exercise, too much overlooked. I mean the inability to bear the least shock of disease in any other organ, as if the vital forces had been all used up in supplying the demands of the brain. The ordinary manifestations of this condition are so common, that, in consequence of their very commonness, they fail to make any impression upon us. Foreigners coming among us see it, and speak of it. Sir Charles Fox, one of the Commissioners of the Crystal Palace, while in Boston, not long since, visited one of the high schools for girls. On coming away, he remarked to his friend, 'You seem to be training your girls for the lunatic asylum.' Such was the impression made upon an intelligent stranger, by their intellectual achievements, in connection with their pale and sallow faces."

In conclusion, he said he was much struck with the full, robust forms and rosy looks of the Quebec girls, as contrasted with the thin, slight frames, pale and sickly faces of the American girls in the States, and hoped they would never adopt the forcing, stimulating modes of education.

Dr. Choate, in behalf of the Committee on Resolutions, then made the following report :

Whereas, during the present session of this Association, we have been received by our brethren in this city with a most cordial welcome, and have been entertained in the true spirit of hospitality ; have been permitted to visit their many interesting Institutions, and the spots made famous by great natural curiosities, and by deeds re-

nowned in history : being desirous to place upon record our deep sense of the civilities tendered us, and the ample gratification afforded us by our visit to Quebec, it is therefore

Resolved, That to Drs. Morrin, Douglass, Fremont, Marsden, and Von Iffland are justly due, and are hereby respectfully tendered our sincere appreciation of their assiduous attentions, and their constant, unremitting, and highly successful efforts to render our visit both entertaining and instructive.

Resolved, That our opportunity of examining the most excellent arrangements of the Hôtel Dieu, under the management of the Sisters of Charity, and of the Marine Hospital, under the care of Dr. Sewall, has given us the most favorable opinion of the truly liberal and benevolent spirit, in which the charitable institutions of this city and country are conceived and carried on.

Resolved, That our inspection of the magnificent plan upon which the new Laval University has been constructed, and the thorough and liberal arrangement of all its details, has been to our minds a most convincing evidence of the enlarged views of mental culture, which prevail among those who have established, and will sustain it.

Resolved, That to the Managers of the Quebec Lunatic Asylum, we would offer our hearty acknowledgements of the elegant entertainment provided for us when visiting their Asylum, and our admiration of their excellently arranged and conducted Institution, and its beautiful grounds.

Resolved, That to Dr. Odell we would render our especial thanks for the opportunity afforded us of inspecting the wonderful and world-renowned citadel of Quebec, and the ever-memorable plains of Abraham, and monuments connected with it.

Resolved, That our thanks are also due and are hereby tendered to Willis Russell, for the uniform courtesy and kindness extended to the members of the Association, individually and collectively ; and for his unwearied attention to our comfort.

Resolved, That the foregoing resolutions be published in the AMERICAN JOURNAL OF INSANITY.

Several of the members here expressed their personal obligations for the numerous kindnesses that were showered upon them, and were replied to, in appropriate terms, by Dr. Morrin.

On motion of Dr. Van Deusen, the Association adjourned to meet at Lexington, Kentucky, on the third Tuesday in May, 1859, at 10 o'clock, A. M.

SUMMARY.

INSANITY AMONG CONVICTS.—Some interesting observations on this subject have been made by M. Sauze, physician to the prison and lunatic asylum at Marseilles, and published in the *Annales Médico Psychologiques*. The comparative influence of the separate and congregate systems of prison organization in the production of insanity has been a prominent point of discussion in this connection. M. Sauze is led to believe this question of little importance, and, generally, that the conditions, whatever they may be, of prison-life, are of little effect as causes of insanity. He is disposed to view the mental disease, found without doubt in much larger proportion among convicts than among the non-criminal, as intimately connected in its origin with the tendencies to crime, and springing from the same imperfect and morbid organization. That the cause of insanity among prisoners "is to be sought less in imprisonment, whatever its form, than in the nature of the prison population," is the no doubt sound conclusion of the writer. The importance of a medical knowledge of the antecedents of prisoners, and the constant observance of their condition by medical officers, is strongly enforced in this view.

IMBECILITY WITH DANGEROUS PROPENSITIES IN CHILDREN.—More than the usual number of instances of destructive propensity in young children have been recorded in the journals for the past few months. Several most revolting cases of murder and arson have excited special detail and comment, not only by the press, but in courts of law, and in medical discussions. The matter is, of course, no new development of society in process of degradation, as some have commented upon it, but really deserves greater attention than has been paid it, both in its relations to medicine and law. Its place in mental disease is properly in the division, imbecility. It does not occur,

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so far as we know, except as associated with an imperfect physical organization, and with a stunted intellect. Heredity, of intemperance, convulsive disease, or some form of insanity, is almost without exception associated with it. Under these conditions we should expect to find the propensity quite ineradicable, and indeed likely to be aggravated by years. This should be understood by those having legal cognizance of its subjects; and they should be, if not permanently removed from society, yet with the completest possible safeguards against their incurable dispositions.

CHOREA AND THE RHEUMATIC DIATHESIS.—In a clinical lecture at Guy's Hospital, London, by Dr. Addison, reported for the *Medical Circular*, the very frequent connection of chorea with rheumatism is noticed. In the case before the lecturer, of a delicate, strumous boy, was the characteristic perspiration of rheumatism, and mitral bruit of the heart. The Protean forms, and eccentric habits of rheumatism and gout were illustrated, and the treatment of chorea from the fact of its dependence upon these diseases pointed out. Nothing new is derived of the pathology of the former diseases, or in explanation of their effect in the production of the chorea.

The lecturer refers to his success in the treatment of "ligamentous rheumatism" by mechanical pressure, bandaging, splints, &c. It is a curious as well as a valuable fact, that complete bandaging, or swathing in sheets, so as to control the convulsions, has been found of great use in chorea. In one instance, a child extremely affected, and who rebelled at the swathing, was held tightly in its mother's embrace for several hours at a time, and the treatment aided to a favorable result.

APPOINTMENTS.—Dr. Wm. Henry Prince has been appointed Superintendent of the new Hospital for the Insane, at Northampton Mass.

Dr. John P. Gray, Sup't N. Y. State Lunatic Asylum, has been appointed Consulting Manager to the Asylum for Insane Convicts, Auburn, N. Y.

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BOOKS AND PERIODICALS.

Since our last issue the following publications have been received in exchange, or otherwise.

An Essay on Wasting Palsy. By William Roberts, B. A., M. D. London: John Churchill, 1858.

The Phenomena of Spinal Irritation, and Other Functional Diseases of the System explained, and a Rational Plan of Treatment deduced. By Thomas Inman, M. D. London: John Churchill.

Epilepsy, and other Convulsive Affections, their Pathology and Treatment. By Charles Bland Radcliffe, M. D. London: John Churchill.

A Manual of Psychological Medicine: Containing the History, Nosology, Description, Statistics, Diagnosis, Pathology, and Treatment of Insanity, with an Appendix of Cases. By John Charles Bucknill, M. D., and Daniel H. Tuke, M. D. London: John Churchill.

Pathology and Treatment of the Paralysis of Motion. By J. P. Batchelder, M. D. New York.

Transactions of the Medical Association of Southern Central New York, at the Tenth and Eleventh Annual Meetings. Binghamton, 1857.

Lectures on the Sulphate of Quinia: Delivered in the University of Michigan. By A. B. Palmer, M. D. Detroit, Mich.

Tenth Annual Report of the Inspectors of State Prisons of the State of New York. Albany, 1858.

Sixth Annual Report of the New York Juvenile Asylum. January, 1858.

The Thirty-fourth Annual Report of the Officers of the Retreat for the Insane at Hartford, Conn. April, 1858.

Report of the Trustees and Superintendent of the Butler Hospital for the Insane. Jan. 28, 1858.

Reports of the Proprietors and Managers of the Lower Canada Lunatic Asylum, to the Commissioners. Quebec, 1858.

The Report of the Resident Physician of the New York City Lunatic Asylum, Blackwell's Island. For the Year 1857.

MEDICAL EXCHANGES.

Annales Médico-Psychologiques. Paris. Not received since January, 1858.

Gazette Médicale de Paris. Paris.

Bulletin de L'Académie Impériale de Médecine. Paris.

Journal de Médecine et de Chirurgie Pratiques. Paris.

Revue de Thérapeutique Médico-Chirurgicale. Paris.

The Asylum Journal of Mental Science. London.

Dublin Medical Press. Dublin.

Dublin Quarterly Journal of Medical Science. Dublin.

British and Foreign Medico-Chirurgical Review. London.

London Lancet. London.

- New Hampshire Journal of Medicine. Manchester, N. H.
New York Journal of Medicine. New York.
American Medical Monthly. New York.
American Medical Gazette. New York.
The Scalpel. New York.
Buffalo Medical Journal. Buffalo, N. Y.
North American Medico-Chirurgical Review. Philadelphia.
Medical and Surgical Reporter. "
American Journal of Medical Sciences. "
Rankins' Half-Yearly Abstract. "
American Journal of Pharmacy. "
Journal of the Franklin Institute. "
Journal of Prison Discipline and Philanthropy. "
The Medical News and Library. "
Virginia Medical Journal. Richmond, Va.
Charleston Medical Journal and Review. Charleston, S. C.
Southern Medical and Surgical Journal. Augusta, Ga.
Atlanta Medical and Surgical Journal. Atlanta, Ga.
New Orleans Medical and Surgical Journal. New Orleans.
Pacific Medical and Surgical Journal. San Francisco, Cal.
St. Louis Medical and Surgical Journal. St. Louis, Mo.
Iowa Medical Journal. Keokuk, Iowa.
Memphis Medical Recorder. Memphis, Tenn.
Southern Journal of Med. and Physical Sciences. Knoxville, Tenn.
Cincinnati Lancet and Observer. Cincinnati, Ohio.
Nashville Journal of Medicine and Surgery. Nashville, Tenn.
Chicago Medical Journal. Chicago, Ill.
Peninsular and Independent Medical Journal. Detroit, Mich.
Medical Chronicle. Montreal, Canada.
American Journal of Dental Science. Philadelphia.
Dental News Letter. Philadelphia.
Oglethorpe Medical and Surgical Journal. Savannah, Ga.
Maine Medical and Surgical Reporter. Portland, Me.
Boston Medical and Surgical Journal. Boston, Mass.
American Veterinary Journal. Boston, Mass.
Quarterly Summary of the Transactions of the College of Physicians of Philadelphia.